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Good Powder for a Horse

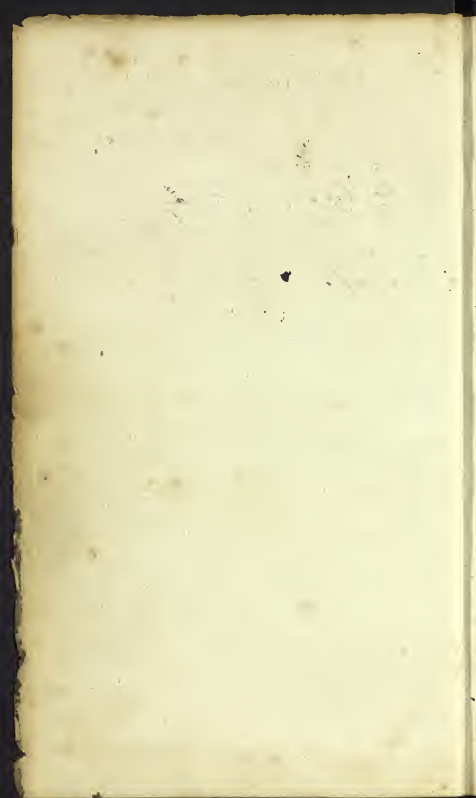
$\frac{1}{2}$ lb of Calc. Antimony

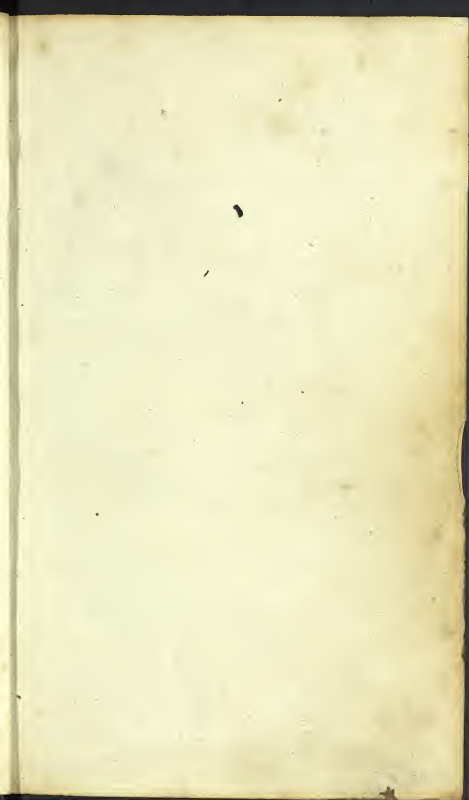
$\frac{1}{2}$ lb of Nitre

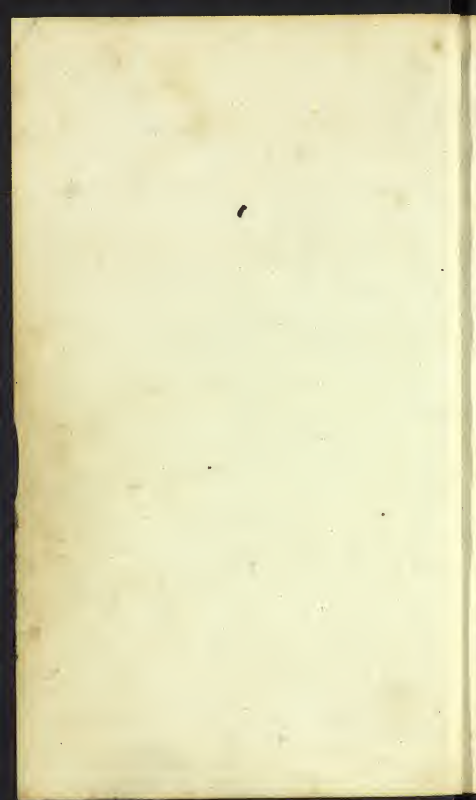
$\frac{1}{2}$ lb Cream of Tartar

$\frac{1}{2}$ lb Flower of Sulphur

ground and mixt together
a table spoonfull to be given
in a Mash







OBSERVATIONS
ON THE
BREEDING AND MANAGEMENT
OF
NEAT CATTLE;
TOGETHER
WITH A DESCRIPTION
OF
THE DISEASES
TO WHICH THEY ARE LIABLE,
AND THE MOST
APPROVED METHODS OF TREATMENT.
TO WHICH IS
ANNEXED AN APPENDIX.

BY JOHN TINDALL.

LEEDS:
PRINTED FOR THE AUTHOR,
By Edward Baines.

1811.

Entered at Stationers'-Hall.

ADVERTISEMENT.

DEEPLY impressed with a sense of the obligations I am under to numerous gentlemen for their kind assistance and information; I should deem it ingratitude of the worst kind, not to avail myself of the present opportunity of acknowledging their favours, and tendering them the effusions of a grateful heart; in doing which, I feel the most exalted pleasure: and I trust they will believe me when I assure them, that a remembrance of their kindness will never be erased from my mind.

To those gentlemen who have favoured me with friendly communications, but with whom I cannot coincide in opinion, I am no less indebted; they have a right to their own ideas on the subject, until convinced by reason or experiment of the fallacy thereof; a

ADVERTISEMENT.

conviction of which is the sole cause of my dissent therefrom: and I am proud in the hope of one day or other seeing them renounce their present notions, as the offspring of prejudice and preconceived opinions, uninfluenced by reason and unsanctioned by the result of actual observation. Were my pen able to do justice to my feelings, I should receive additional pleasure in describing them, but as I am not equal to the task, I can only offer them my warmest thanks, and

REMAIN THEIR TRULY OBLIGED,

AND VERY HUMBLE SERVANT,

John Tindall.

PREFACE.

WHILST some prostitute distinguished talents in writing invectives against their superiors in office, thereby hoping to gain proselytes to their own tenets, be they ever so wild or visionary; and others are sacrificing their judgments, and too often truth, for daily support, in furnishing panegyrics on the great, or decking out advertisements for the empirics of the day; be it my task in an honest though simple way, to communicate to the adventurous breeders of Neat Cattle, through the pages of the present treatise, such useful instructions in the breeding and management thereof, together with a description of the diseases to which they are liable, and the most approved methods of treatment, as I have through a long series of years been able to acquire, not theoretically, but from professional observation. I am induced to undertake this work from a conviction of the want of such a performance, at a time when the convulsive shocks to which mercantile and commercial houses have recently been exposed, have driven men of fortune from such precarious adventures, to seek more premanent success in agri-

cultural pursuits ; pursuits which to an admirer of the wonderful economy of nature afford not only pleasure, but ultimate success, if proceeded in with diligence and supported with judgment. That such a work would benefit the agricultural world, I have the concurrent testimony of its greatest characters ; who, in all their conversations with me on the subject, have lamented the want of such a production, acknowledging at the same time, that numerous treatises have made their appearance on the subject, some having been written by men of letters, but destitute of practical knowledge, others written by men accounted adepts in husbandry in all its branches, but who, from embracing too many objects, have not been copious enough on any one, especially that which I now profess to treat upon. It remains with you, candid reader, to judge how far I have obviated the evil just alluded to in my present undertaking. Had nature and education formed me to elucidate my subject with perspicuity and ease, or did I possess that flow of eloquence and elegance of diction which some of my cotemporaries on other subjects command, my efforts might be more worthy of the critic's perusal ; but in that case, I might be more prolix but less instructive, by depending more on the flowers of rhetoric, to embellish my first undertaking, than on what

concerns the best interests of those for whom I chiefly write, namely, an elucidation of facts, the knowledge of which is not speculative, but founded on experience; the grand touchstone of scientific knowledge. By men accustomed to cavil at every fresh production, (and who by the bye support themselves by such venal practices) I may be accused of want of arrangement, and fifty paltry violations of critical institutes; but if I convey that information to my readers, so much desired by farmers, &c. I trust my obscurity in life, and the confession I have made of literary inability, will secure me from the severity of the critic's fiery ordeal; and if I escape that, I flatter myself the following pages will not prove unworthy the attention of all who are, or who may wish to become breeders of those profitable domestic animals, Neat Cattle. But should the chilling blast of disappointment blight the earliest buds of hope, I shall strive to brave the storm with all its train of attendant evils, and take shelter in the pleasing idea of having striven to deserve success, though unable to command it. I may be deemed a plagiarist by some who have read Cully's observations on live stock, which in the descriptive part could not well be avoided; but when it is considered that I do not pretend to establish any new discovery, or claim to myself the merit of being the sole

Author of the following sheets, unaided by observations from gentlemen of known celebrity on the subject, I trust I shall escape the shafts of malevolence and the sneers of obloquy; being more desirous of diffusing useful knowledge, than ambitious to rank as an author. I trust no apology is necessary for the introduction of the engravings; I am no connoisseur, but am enabled to say, they have the merit of being faithful representations of the extraordinary animals they are meant to delineate, accurately copied from drawings made by an eminent artist from life, expressly for the purpose they are devoted to; in which will be found muscular strength and symmetry of form; two distinguishing characteristics of a good breed, and what ought to determine farmers and others in the choice of their purchase, if they wish to command profitable and serviceable stock.

Should my reader experience the smallest disappointment from want of novelty in the plan; or erudition in the execution of my present task, I flatter myself, and with much confidence, that if he knows how to appreciate what is of more moment to him than a graceful line, or a well-turned sentence, he will not deem his time wholly misspent in the pursual, nor his money thrown away in the purchase of this book, when by so small a sacrifice, he is put in possession of such valu-

able receipts as I now, for the first time communicate for the benefit of all whom they may concern, which is no inconsiderable part of the community, when it is considered how many thousands maintain themselves by keeping milch cows, to supply the demands of large manufacturing towns with milk and cream, independent of farmers, graziers, breeders, &c. and a numerous list of private families who keep a favourite cow for their own accommodation and pleasure; each of which are liable to be attacked by diseases through every stage of animal existence.

Here then is health's palladium in a few choice recipes, each of which will infallibly effect the end proposed in its administration, if the directions given with each are invariably followed and steadily persisted in, without adding thereto, or diminishing therefrom in any single instance.

And of this part of the work I speak with more confidence than any other, because it has fallen more immediately under my own observation, having daily administered or applied them with ultimate success in the most desperate cases: and I am fully convinced, that a trial of their efficacy will give them a decided superiority over any thing of the kind hitherto made public.

I sincerely hope the reader will not condemn this last assertion as egotism, nor as

made to depreciate the worth of others of which the world are already in possession.

Should I be so unfortunate as to incur disapprobation from individuals, on account of discarding their opinions, I trust they will be generous enough to allow me the indulgence of my own; and as I do not claim to myself infallibility of judgment, or pretend that my decision shall be the standard of another's choice, I hope none will take umbrage at what I have written, having merely stated, what after mature investigation and deliberate reflection, appears to me to be best calculated to promote the general interest of the farmer, &c. &c. Utterly disclaiming the meanness of opposition from unjust motives, and the fashionable one of gaining popularity by another's depreciation.

In all my agricultural researches, utility has been the object I have had in view, to accomplish which, an impartial investigation of other men's labours I deemed no less necessary, than the amount of my own practice, a combination of which constitutes the present treatise; in recommendation whereof I can only say, the reader will find truth the most prominent feature, though it may not be recognized. Men who having once formed a different opinion, may consider themselves too well versed in scientific knowledge to be directed by an obscure individual.

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ERRATUM.

Page 39, line 9, instead of 14 lb. to the stone,
read 16 lb.....Tallow 10 st. each, price 38^l. each.

CHAP. I.

DIFFERENT NAMES

ATTACHED TO NEAT CATTLE, AT STATED PERIODS OF THEIR LIVES, BY WHICH THEIR AGES BECOME KNOWN PREVIOUS TO ARRIVING AT MATURITY, OR FULL GROWTH.

HOPE suggests and encourages the wish that my present efforts to instruct, may not be confined to the amateurs in breeding, but that its publication may excite a spirit of emulation to become such, not only in needy adventurers, but amongst men of rank, who have not only leisure time to devote thereto, but possess the means of prosecuting a science which affords its professors pleasure and profit.

Before I enter further on the subject, I deem it necessary that the novice should have a little information, which to the pro-

ficient may appear superfluous; but such will remember that it is rendered so to them merely from having acquired the knowledge which it exhibits as the first rudiments of a profession, now become familiar to them.

Arbitrary as the English language is in many respects, even to the expulsion of many words out of whole counties. So that what is the common name of a bird or beast, &c. in one part of the kingdom, is not so much as known or guessed at in another part by that identical word. I believe that BULL universally prevails in England, for the name of the Male of Neat Cattle, in its natural state, that is before it has submitted to the painful operation of Castration, and at the same time has arrived at maturity.

But then it bears other names previous to its arrival at maturity, and also assumes different names if gelt—the knowledge of which I wish to point out to the young beginner, for a proficient in live stock, knows the age of the beast he is about to purchase, by the name it bears, with as much precision as an antiquarian knows the age of his coin or medals by their inscriptions and date; thus for instance, if a BULL CALF be offered him

for sale, he at once concludes, that the animal is under a year old, and that he sucks the dam, because when he is turned that age, he no longer bears the name of a bull calf, but is denominated a **STIRK**, or Yearling Bull: advanced to two years old, he bears no more the name of **Stirk**, but is stiled a **TWO YEAR OLD BULL**, progressively advancing he retains the name of **BULL**, his age then being expressed numerically, as three, four, five, or six years old bull, at which age he gains the appellation of aged, and maintains it till deprived of it with his existence.

When rendered sterile by castration, he is called an **Ox**, or **Stot Calf**, until he has completed his first year, after which until the expiration of the second year, he is distinguished by the of name **STIRK**, **STOT**, or **YEARLING**: next a **TWO YEARS OLD STEER**; then **THREE YEARS OLD STEER**, and at four years old, first assumes the name of **Ox**, or **BULLOCK**.

Notwithstanding the extent to which provincial dialect has attained, I may venture to say, that the word **Cow** is used in every part of England, to denote the females of this genus, when arrived at maturity, in her

fourth year, and is perfect in her kind, or remains ungelts. But if robbed of nature's great prerogative in the prevention of propagating her species, she goes under the denomination of a SPAYED or CUT HEIFER; or a SPAYED or CUT WHY; as the case may be ascertained by her age, which names not only serve to denote her age, but point out her impotence, or unfitness to bear calves.

On the other hand, if the castrator's knife has not performed its cruel operation, but she runs at large as nature intended her, and during the time she is nourished by her dam's teats, a COW CALF is her appellation: next a YEARLING WHY, or HEIFER: advanced another year in life, her age becomes known by the determinate words, THREE YEARS OLD WHY, or HEIFER: and next year she assumes the name of COW, as noticed before; beyond which name she never goes.

* From the Danish Quie; the Swedish Qwiga.

CHAP. II.

THE AGE OF CATTLE,

HOW TO BE ASCERTAINED.

THE Teeth alone in my opinion are the true standard; unlike most other quadrupeds, they are furnished with teeth on their very entry into the world: but these, like the temporary dentes of the human species, or as they are commonly termed, *Milk Teeth*, are shed, though not till the animal has completed its second year. Nature having effected this process, two new teeth make their appearance; which may with propriety be called permanent ones: two more arrange themselves at three years old; and the same ratio is uniformly observed in the next and the succeeding year, so that at five years old, it is in possession of all its new teeth, and said

to be full mouthed, though not very properly so, by reason of the two corner teeth, requiring another year to make them equal in height with the other ; so that in strictness of speaking, it is not full mouthed until six years old. If therefore you want to know its age, you have a standard at once, from two, through the intermediate years up to five.

Mr. Cully takes notice of the circle or wrinkle, which manifests itself on the horn at three years old, and remarks that another such wrinkle is added thereunto, each succeeding year as long as the horn stands on ; as a general rule it is so, but as most general rules admit of exceptions, I have witnessed more than one to this, and have seen a cow just rising five years old, sport five protuberant circles, completely surrounding the horns ; another cow turned five. I have seen, which at that age had no more than two wrinkles on her horns, though no rasp had ever come upon it, or any other art used to reduce the number produced by nature. Judging from the last exception, I should have concluded that she was no more than four years old, and forming an opinion from

the first, I should have been warranted in pronouncing her seven: besides the ease with which such protuberances can be filed away so as to escape detection, forbids such circles from forming the criterion required. Having thus advanced a few desultory remarks, not as the offsprings of my own brain, for they are nearly coeval with the science itself, I beg leave to impress it on the minds of the inexperienced, not to rest in supineness, trusting in another's judgment, who too often have an interest in deceiving the novice, but persevere in the acquirement of professional skill, by every laudable means.

CHAP. III.

CHARACTERISTICS,

OF THE

MALE AND FEMALE.

HAVING already observed, that the name of the male of neat cattle is **BULL**, and also given the names he supports before he is entitled to that name, I propose in this place to enumerate those qualities which the different parts of his body ought to possess, to render him a truly valuable acquisition to his master, and the admiration of all judges of beautiful forms, exhibited in the symmetry of parts proportionate to one another, a combination of the whole, forming an assemblage of external beauties, and producing those agreeable sensations in the acute observer of

proportion, which never fail to excite the most exalted ideas of that being, who has combined strength with pliancy, and beauty with utility. But as in the human species, it is difficult to meet with an individual in whom are combined, all the beauties of proportion as laid down by the great masters in the art of painting, &c. as the standard of perfection; so it must be acknowledged no easy matter to find a Bull possessing in itself all those requisites, which the judicious Mr. CULLY describes, as necessary in the formation of one. That Gentleman's description of the bull is so consonant to nature, so just, and at the same time so concise, that I cannot pay him a greater compliment, than by quoting him literally; the head, "says he," should be rather long, and muzzle fine; his eyes lively and prominent; his ears long and thin; his horns white; his neck rising with a gentle curve from the shoulders, and small and fine where it joins the head; his shoulders moderately broad at the top, joining full to his chine and chest backwards, and to the neck vien forwards; his bosom open, breast broad, and projecting well before

his legs, his arms or fore thighs muscular, and tapering to his knee; his legs straight, clean, and very fine boned; his chine and chest so full as to leave no hollows behind the shoulders; the plates strong, to keep his belly from sinking below the level of his breast; his back or loin, broad, straight, and flat; his ribs rising one above another, in such a manner that the last rib shall be rather the highest, leaving only a small space to the hips or hooks, the whole forming a round or barrel-like carcase; his hips should be wide placed, round or globular, and a little higher than the back; the quarters (from the hip to the rump) long, and instead of being square, as recommended by some, they should taper gradually from the hips backward, and the turls or pott bones, not in the least protuberant; rumps close to the tail; the tail broad, well haired, and set on so high as to be in the same horizontal line with his back."

An animal answering in all particulars the above model, would be as much admired by the connoisseurs in live stock, as the *venus de medicis* is by sculptors, painters, &c. &c. The Bull generally attains the age of puberty

at fifteen months old, his best age is at two, or from one and a half to three; before he arrives at full growth, when he begins to grow heavy and sluggish, hence that old rustic proverb—

“ He that will have his farm full,
Must have an *Old Cock* and a *Young Bull*.”

Though some are of a contrary opinion, and think he should be restrained from his species until he is four years old; but I think this notion will soon be exploded, as the generality of breeders of the present day allow them to be put to the cow at two years old. When arrived at five or six years of age, and denied commerce with the female of his species, the turgescency of his seed fires his blood, and he becomes mischievous and vicious, and if not put to the draught is commonly castrated, and fed for the butcher. One Bull suffices for sixty cows, and his natural life is from sixteen to twenty years; but it is advisable to curtail it, and afford by his death, a delicious repast to the lovers of such substantial food, at the age of six or eight years.

I have already noticed the name of the female of neat cattle to be Cow, the

distinguishing characteristics of which are, that there are eight cutting teeth in the lower jaw, and none in the upper; that the skin along the lower side of the neck is pendulous; and that the horns bend out laterally. Of all ruminating animals, or those which chew the cud, the cow kind deserves the first rank both for beauty and utility, she is the poor man's blessing, and equally constitutes his riches and support.

The climate, as well as the pasture of Great Britain is excellently adapted to the moderate nature of the cow, and the verdure and fertility of our plains, are perfectly suited to the manner of her feeding, for being destitute of the superior fore teeth, she delights to graze in high and rich pastures, she does not seem to be very anxious as to the quality of her food, provided she has always an abundant supply; and makes no particular discrimination in the choice of her herbage, but eats without ceremony whatever comes in her way. For this very reason, in our English pastures, where the grass is rather high and flourishing, than succulent and nutrititious, the cow thrives admirably; and there is no part of Europe where this animal

grows larger, yields more milk and fattens sooner.

Cows usually receive the males from the beginning of April to the end of July, and go nine months with young; but the season of copulation may be altered; for, by a particular method of management, veal is procured at every season of the year.

CHAP. IV.

OBSERVATIONS

ON THE VARIOUS SPECIES OF NEAT CATTLE, BRED IN ENGLAND, &c.; THEIR SPECIFIC CHARACTERS &c. AND INSTANCES OF EXTRAORDINARY ANIMALS EITHER FOR BULK OR BEAUTY.

AFTER noticing the characteristics of the male and female, it may not be improper to advance a few observations respecting the different breeds our Islands produce from crosses, that is, a Bull of one particular kind copulating with a Cow of a different kind, and in time, when nature has bestowed virility on the produce of such copulation, it propagating its species with another, will produce one totally different from either of its parents, relatively considered as to make, shape and weight and so on through successive generations, till from

choice of such diversity, the possessor acquires a breed, combining in themselves beauty, service, ableness, and profit, three advantages worthy of the attention of every one concerned in the breeding, rearing, and managing of these valuable domestic animals. First, I shall just cursorily remark that, in the highlands of Scotland, the cattle are extremely small, and many of them, males as well as females, are denied the advantage of horns. The Welch Runts are larger; and the Cornish black cattle are about the size of the latter.

The Lincolnshire cows derive their size from the Holstein breed; and the large hornless cattle which are bred in some counties of England, were imported originally from Poland. There are now no traces of a wild breed of these animals, except in the pages of the historian; I speak only of our own Islands, once so famous for them, at once the terror and delight of those who indulged in the pleasures of the chase.

Mr. Osbaldiston observes that, the cow seems more liable to changes from its pasture and climate, than any other quadruped.

In the different parts of this narrow Island, we can easily trace the great varieties produced among these animals by the fertility or barrenness of the soil.

In some they grow to a magnitude inconceivably great, whilst in others they acquire no bigger a bulk than is sufficient to stamp them dwarfs. The breed of the Isle of Man, as well as most parts of Scotland, are in general considerably less than that of either England or Ireland. The conformation of some parts of them also appear different, particularly evinced in the dewlap, and in the neck : the former being much smaller, which is now considered as a defect ; and the latter bearing too near a resemblance to the neck of the ewe.

VIRGIL speaks in panegyrics on a capacious dewlap, though others are of opinion that, the cow wants in udder, what she boasts of in dewlap ; and gives a proportionate less quantity of milk, maintaining that, what she gains on the score of beauty, if such ; she looses on that of profit : suffrages having run nearly equal in debating this subject, graziers have endeavoured to blend the two

breeds, namely, the Large Holstein with the small Northern, and daily observation warrants the assertion, that their efforts have been crowned with the most ample success; for from the union is produced that fine milch breed, which excels so conspicuously the cattle of every other quarter of the Globe. Desultory as the foregoing remarks may appear, they have the best authorities for their vouchers; and I trust they have truth to recommend them to those for whose sakes they are either written, or transcribed. Unwilling to be thought prolix in general observations, I will leave that beaten, though to me, pleasant track, where the "mind's eye" can extend its view to immeasurable distance, and at one glance behold myriads of objects equally wonderful and transporting; and confine myself to a description of the specific characters of each particular breed; in the developement of which, my judgment shall not forfeit its prerogative to examine, nor my reason be immolated to prejudice.

Fearless of censure, though unwilling to offend, I will endeavour to discriminate between truth, and the specious appearance thereof, though it may expose me to the sneers of the obstinately partial.

CHAP. V.

THE SHORT HORNED,

OR

TEES-WATER BREED.

IT may perhaps be enquired by some, why I give a decided preference to this species of neat cattle, before all others, when some are partial to the long horns, even to enthusiasm.

To such I beg leave to observe, it is from a conviction of their real value, that I do it; not because all other breeds are daily becoming more and more questioned, as to utility and profit, though I should imagine that a sufficient reason, did none else offer itself. In this breed are combined all that is desirable for the grazier, butcher, and each individual

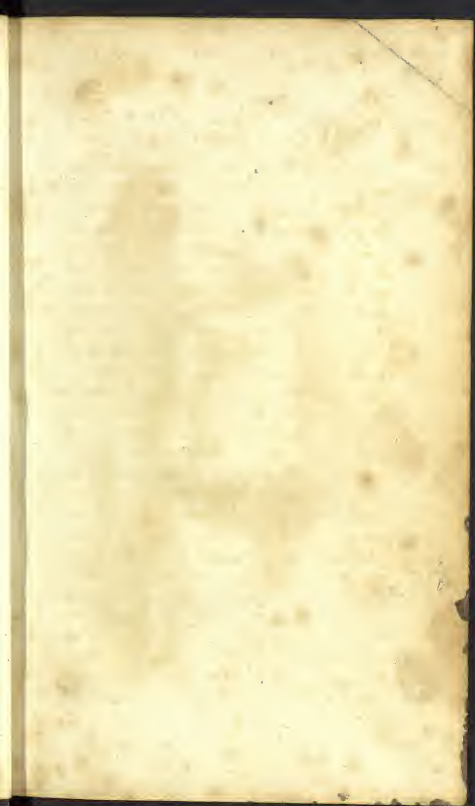
purchaser, after its exposure for sale in the market : muscular strength and flexibility ; beauty of form, and kindliness of disposition, are conspicuous therein ; to which add, from judicious crosses, their bones are much finer, and smaller, in proportion to the size and weight of their whole carcase, than any other breed England commands. And in point of appearance and flavour, when hospitality graces the table with an Englishman's favourite dish,—a sirloin ; furnished from the breed in question, few, very few, are able to vie with it, and none to gain the palm of victory over it ; if fineness of grain, ruddiness of complexion, abundance of rich gravy, and a pleasing mellowness and delicious flavour, may be allowed to claim a victory, when placed in competition with others which cannot boast such desirable, commendatory qualities.

Its most prevailing colour is red and white : its head and neck beautifully formed, agreeably to the idea graziers and others have of beauty, in live stock. Its head graced with short horns, from which it takes its name : skin thin ; broad over the shoulders ; deep in the chest ; wide in the loins, and the hips.

placed widely also; straight back, and fine in the bone, relatively considered: constitution truly excellent; and what recommends them above every thing else is, they possess the valuable properties of feeding well; giving abundance of milk; and when slaughtered, affording a large quantity of tallow, which at the present advanced price of that article, claims particular attention. The principal resort of this breed is in the north Riding of Yorkshire, and the Bishopric of Durham. The river Tees pleasantly running through the centre of the verdant pastures, which have brought to such perfection, by their nutritious herbage and succulent grasses, those astonishing animals, which have of late years, and are at the present moment, travelling through England, as wonderful productions of nature and human industry; exciting astonishment wherever they go, and a spirit of emulation amongst breeders, to add such a race to their stock, as the one under consideration; at once calculated to improve both their breed and their fortunes, which surely are objects worthy the attention of every one.

For the gratification of the lovers of ex-

terior beauty, and at the request of numerous gentlemen who are good judges thereof, I present them with a specimen of this breed, in the portraiture of a bull, the form of which will be found to correspond with the description I have just given of a perfect animal of the Tees-water breed. This beautiful bull was bred by Mr. J. Nicholson, of Gipton; near Leeds, in the west-riding of Yorkshire; in whose possession he obtained the following premium, viz. at York, for the best two years old bull, in 1805. Again, at the same place, in 1806, he bore away the prize of competition, and was indisputably allowed the best three years old bull, there exhibited. At Otley, ten miles from Leeds, he again manifested his superiority, in 1807, against all ages, which speaks more in his praise than any panegyrics I can bestow upon him. It must be observed that, in 1805, and also 1806, the shew of neat cattle was not confined to certain districts as at present, but extended to the whole County of York. So that every impartial mind must acknowledge him a truly fine beast, and I have no hesitation in pronouncing him, the most perfect in symmetry of parts, collectively considered, that





I ever saw exhibited at a shew of cattle, of the nature of those just mentioned. This bull was a descendant of a noted breed of a Mr. James Brown, of Aldborough, near Darlington.

The Cow of this species should possess a head rather long and small, the muzzle whereof should be fine; large and expressive eyes; horns correspondent to its name, but at all events, not to exceed a medium between long and short; in colour inclining to yellow; the neck small, especially where it joins the head, as it adds gracefulness of appearance to its conformation, which is greatly heightened by a thin skin, perfectly smooth, and handling like velvet, covering a large deep body; the thighs tolerably strong; her udder should be large, and as it is technically termed, squarey, not fleshy, but thin and loose when empty, with four elastic teats, or paps; not too long, as some authors think; her legs small, though her hoofs should be pretty large: colour red and white; and in short, should if possibly possess every quality as the bull, already described, respect being had alone to those characteristics which distinguish sex.

Whoever has made the tour of the North of Yorkshire and the Bishopric of Durham, and made observations on the kine of these counties, will find this description correct, in general; though there are, and ever will be some exceptions to every general rule. Nor is there any part of the kingdom, perhaps in the world, able to stand in competition with these two districts, for perfection in breeding neat cattle, and producing valuable stock at an early age; in support of this assertion, I beg leave to present my readers with a catalogue of improved short horned cattle, the produce and property of Charles Colling, Esq. of Ketton, near Darlington, in the county of Durham; who ranks so high in the breeding and rearing of valuable and beneficial stock. I must observe, that the undermentioned cattle were disposed of by public auction, on the 11th of October, in the year 1810, and fetched the astonishing prices affixed to their respective names.

BULLS.

COMET *—Six years old, was sold to a Mr. Wetherill, of Field Head, near Darlington, for no less a sum than one thousand guineas!

PETRACH—Two years old, was purchased by Major Rudd, a gentleman of considerable agricultural knowledge: for three hundred and sixty-five guineas.

MAJOR—Three years old, sold for two hundred guineas.

ALFRED—One year old, for one hundred and ten guineas.

MAY-DUKE—Three years old, for one hundred and forty-five guineas.

DUKE—One year old, for one hundred and five guineas.

NORTHUMBERLAND—Two years old, for eighty guineas.

OSSION—One year old, for seventy-six guineas.

ALEXANDER—One year old, for sixty-three guineas.

YARBOROUGH—Nine years old, for fifty five guineas.

HAROLD—One year old, for fifty guineas.

SUCKING BULL CALVES.

CICEL—One hundred and seventy guineas.

YOUNG FAVOURITE—One Hundred and forty-one guineas.

GEORGE—One hundred and thirty guineas.

ALBION—Sixty guineas.

SIR DIMPLE—Ninety guineas.

KETTON—Fifty guineas.

* Since the Sale, Mr. Wetherill has refused fifteen hundred guineas for him.

COWS.

- LILLY—Three years old, was sold to Major Rudd, for four hundred and ten guineas.
- COUNTESS—Nine years old, was also purchased by Major Rudd, for four hundred guineas.
- LAURA—Four years old, two hundred and ten guineas.
- LADY—Fourteen years old, fetched the high price of two hundred and six guineas.
- PEERESS—Five years old, one hundred and seventy guineas.
- CELINA—Five years old, two hundred and six guineas.
- CATHALENE—Six years old, one hundred and fifty guineas.
- MAGDALENE—Three years old, one hundred and seventy guineas.
- DAISY—Six years old, one hundred and forty guineas.
- BEAUTY—One hundred and twenty guineas.
- CHERRY—Eleven years old, eighty three guineas.
- JOHANNA—Four years old, one hundred and thirty guineas.
- CORA—Four years old, seventy guineas.
- FLORA—Three years old, seventy guineas.
- MISS PEGGY—Three years old, sixty guineas.

HEIFERS.

- COUNTESS—Two years old, two hundred guineas.
- YOUNG DUTCHESS—Two years old, one hundred and eighty three guineas.
- CHARLOTTE—One year old, one hundred and thirty-six guineas.
- LUCY—Two years old, one hundred and thirty-two guineas.
- PHOEBE—Three years old, one hundred & five guineas.

YOUNG LAURA—Two years old, one hundred and one guineas.

HEIFER CALVES.

LUCILA—One hundred and six guineas.

WHITE ROSE—Seventy five guineas.

CALISTA—Fifty Guineas.

RUBY—Fifty guineas.

What can speak louder in support of this breed, than the above prices, paid too, at an auction. Or what would the breeders of the finest cattle our island boasted of, a century ago, have thought, had any speculative mind hinted at the possibility of ever so far improving their stock, as to sell a single bull, for a thousand guineas, or a sucking bull calf, for one hundred and seventy guineas? I think he would have been pronounced a lunatic; and all his arguments treated with derision: and yet we have witnessed the event, and if we may judge by the avidity with which the bidders advanced, we may reasonably conclude that each purchaser was satisfied with his bargain, nor is it so much to be wondered at, when the reader is informed that, in such estimation is this gentleman's stock held, by real judges of what constitutes

a good stock, that it is no unusual thing for farmers, &c. who are anxious to improve their breed, to pay, for the use of a single bull, for the season, from fifty to two hundred guineas, including four months, say, from March to July. As then there are other gentlemen in this part of the country celebrated for possessing invaluable stock, I trust they will not accuse me of partiality in passing their names over in silence; I cannot, however, close the account of this particularly profitable breed, without noticing a few very remarkable ones: and first, ROBERT COLLING, Esq. brother to CHARLES COLLING, Esq. of Ketton, has at the time I write this account, a heifer living, of this species, the most astonishing animal of the neat kind, in nature; in point of beauty, she may be considered as a model; in point of fatness, matchless; supposed to weigh, one hundred and thirty stone, the four quarters; fourteen pounds to the stone; yet with all this weight to support, she is capable of great exertions, and walks with a facility seldom witnessed in fat cattle.

Mr. CHARGE, near Richmond, in the north-riding of Yorkshire, bred and fed an



An Ox of the short horned Breed.



Ox of the Tees-water breed, which when slaughtered, weighed one hundred and sixty stone, fourteen pounds to the stone.

In 1802, Mr. JOHN NICHOLSON, of Gipton, near Leeds, sold six three years old Steers, of the short horns, or Tees-water breed, to Mr. William ARTON, butcher, of Leeds, which were slaughtered by him at that age, and averaged eighty stone each, 14lbs. to the stone, the weight of tallow, afforded by these extraordinary Steers, averaged eight stone each. These animals were bred by Mr. J. BROWN, of Aldborough, near Darlington; were looked on by all who saw them with admiration! And allowed to be of more value, at that time, than any lot of the same number, in the possession of any single individual in Great Britain! He received for them from Mr. Arton, £38 each.

In the list of uncommon animals, I cannot omit to mention one of the Short Horned breed, bred by a Mr. THACKWRAY, of Pickhill, near Bedale; a gentleman possessing good cattle, and knowledge to manage them; this was a steer, exactly two years old, which when slaughtered, by Mr. J. WADE, of Cinderby, weighed fifty eight stone; four-

teen pounds to the stone, producing eight stone of tallow. It is worthy of observation, that he never had the least corn, oil-cake, or turnips given him to feed on. The same Mr. Thomas Thackwray, bred another remarkable one of this species, which, when only one year old, weighed fifty stone, fourteen pounds to the stone, the four quarters; this was weighed in 1809. It may perhaps be imagined that this extraordinary Yearling Stirk, attained to this astonishing weight from the richness of the land, upon which he fed; but I have the best authority for saying, that so far from that being the case, his farm is in general of a very strong clayey nature; and, therefore, it is fair to infer, that the weight he attained to, was the result of a propensity to fatten, more than from either the quantity or quality of succulent herbage his land afforded him to graze on.

Having thus laid before the public a few instances of uncommon cattle, I shall notice a very prevalent error, which obtains, respecting the Tees-water breed; that is, that they are tender, and only calculated for warm climates; and too many, ignorant in the extreme, even assert that they are more

liable to be afflicted with diseases; to refute which, only requires the experiment being made: and so fully satisfied am I of the fallacy of the assertion, that I do not hesitate for a moment to say, that nothing less than profound ignorance, or stupid prejudice can be the cause of such an opinion.

In several parts of the west-riding of Yorkshire, the Cows have been, and are kept to great advantage. Tradesmen have found them by experience to be a beneficial kind of cattle, and prefer them to the long horned ones, on account of their giving much more milk, and being worth more as drapes; that is, when they are running off their milk, they commonly give, after calving, twenty quarts per day; and instances are not wanting, where they have even yielded thirty quarts per day: and from three to four firkins, or half hundred weights of butter from each cow, in a season, on a supposition that the dairy consist of twelve cows, or more.

When fed to grace the table of the opulent, or to satisfy the plowman's labour-excited appetite, they commonly weigh from sixty to eighty stone; fourteen pounds to the stone; and some particular ones reach the

enormous weight of one hundred and thirty stone the four quarters, instanced in the white heifer, of R. COLLING, Esq. of Brampton, near Darlington, now living, and already alluded to. Notwithstanding all the advantages resulting to the breeders of this species of Neat Cattle, so strongly trammelled by prejudice is the mind of thousands, that rather than swerve from the plans laid down by their great grandfathers, they will forego the advantages others are daily reaping. It has often been matter of astonishment to me, and regret also, to observe numbers of farmers, of no inconsiderable fortunes, particularly in the west-riding of Yorkshire, whose land, far from being sterile, is in a tolerable good state of cultivation, so lost to a sense of their own interests, or so utterly regardless thereof, as to neglect the improvement of those very cattle, from which they derive, not only the most wholesome and nutritious beverage, for the use of their own domestics; but some of the luxuries of the table, for themselves and their superiors, likewise considerable emolument arising from the sale of their daily produce to indigent parishioners; and as if infatuation had supplanted reason,

act contrary to the dictates of common sense, and in violation of rules framed by men celebrated for agricultural knowledge and whatever tends to the farmers' best interests, by sending their cows to the nearest resident bull: no matter his pedigree, it is out of the question: and some, I am sorry to say, are so careless in this particular as to make no enquiry into his breed, or present condition; but, arguing that, a bull is a bull, rest satisfied in the possession of such knowledge; and thereby lose advantages which those reap, who suffer reason to influence their choice, in matters of what so nearly concerns their future prosperity and welfare in this branch of the farming department.

How long they will suffer such stupidity to envelope their minds, time alone must determine; but since I first made the observation, useful knowledge has diffused itself amongst all classes of people, and some of those of whom I at first complained, have so far broke through their former practices, as to make a trial to improve their breed, by sending cows to bulls of note, disdaining to complain of a little additional expence; and

I am happy to observe that, their expectations, sanguine as they may have been, from hearing of the success of others in breeding counties, have been fully satisfied—so that I am not altogether without hope, that in a little time the sun of reason will dispel the mists of ignorance and prejudice, and that science will irradiate their minds; to the increase of knowledge, and suppression of superstition and false reasoning.

Before I take leave of the Short Horns, or Tees-water breed, I judge it proper here to notice, that in the north west of Yorkshire, there is a very beneficial breed, propagated by a cross from the short horns, and the Lancashire long ones, they reward their keepers with abundance of milk and butter; instances having occurred of a single cow affording sixteen pounds of butter, in one week, each pound, sixteen ounce: they are denominated the half long horns; are a hardy race, and when judiciously chosen, are capable of encountering the most boisterous blasts of hilly counties. But the breed of all others best calculated for cold climates, is a cross obtained from the cows of Gallowayshire, and bulls of the true short horned species;

their usefulness is by no means confined to the grazier; the dairy is enriched thereby, as they are in general good milkers; they discover a propensity to fatten, enjoy a good constitution, and are able to endure cold, wet situations.

What a desirable acquisition must such a cross prove to thousands, who have it in their power to compass such; yet from inattention, bordering on stupidity, rest content with a stock, of no comparative value; for no other reason, but because they have done for their ancestors through many generations, and, why not serve their turns as well? Had such reasoning gained an ascendancy over Mr. Colling, his Comet must have passed into obscurity, eclipsed by others, which now must hide their diminished heads before him! This gentleman's late sale of Short Horned Neat Cattle, and the amazing sum of money raised thereby, have so much engrossed public attention, that I hope the day is not far distant, when this valuable breed will prevail over all others, as it certainly claims a superior title to beauty, serviceableness, and profit. I now hasten to notice the specific character of the Devonshire breed.

CHAP. VI.

DEVONSHIRE CATTLE.

WHICH I think ought to rank next to the Tees-water breed, they are represented to me, by men of judgment and veracity, to possess in an eminent degree, the two good qualities of grazing remarkably well, and shewing an inclination to become fat, at an early age; which are acquisitions, much desired by all who breed and rear cattle, no labour, or expence has been spared to improve them, since the Dishley breed came so much into repute, the judicious Mr. Cully observes, that those of most note, consequently best, are to be found in the vicinity of Barnstaple.

They are most commonly of a deep red colour; fine in bone, which is another great recommendation to the public, for the finer

and lighter the bone, the greater must be the quantity of beef, when sold for the market : they are clean made in the neck ; face delicately made, and fine in the chops ; horns neither too long, nor too short, but excellently calculated to adorn a well-formed head ; their points incline upwards ; in the hips they are wide ; a tolerable barrel ; sides rather flat, at least they do not approach to that globular form which some species do ; in handling their skin, which is thin, you immediately have an idea coresponding with silkiness, which in Neat Cattle is deemed a sure prognostic of a good-conditioned animal ; and I think may fairly be taken as a criterion of a good breed ; their tails are small, and placed by nature much higher than many others ; and they have a decided advantage over most other breeds, in arriving at maturity much sooner ; a natural consequence of fattening at an early age. In counties where draught oxen are employed, these have a superior claim on the farmer's attention and fostering care, nature having in the conformation of their shoulder points, designed them, as it were, for the express purpose of wearing a collar ; with which an agreement of shape is

so well established, that a geometrician, of no mean capacity, might have had the adjusting of one to fit the other, and have merited applause for the coincidence of parts. In hardiness too, and agility of motion, they particularly excel: in fine, they are, in my opinion, a valuable, useful, and profitable breed, inferior to very few, and superior to most which England lays claim to.

CHAP. VII.

THE HIGHLAND BREED,

OR

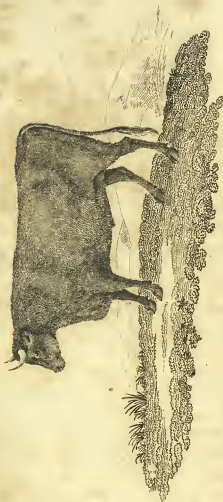
KYLOES,

ARE smaller than the Galloway breed, or Polled Cattle. Their colour for the most part black ; though there are not wanting amongst them Brindled ones, or Duns. Their hair is long, but close set, much like the Polls of Gallowayshire ; horns, proportionably judged of, that is, with respect to the size of their body, a medium between the extremes of long and short ; their common position, bending upwards ; when grazed, they feed readily, and when fed afford a good homely repast, producing beef finely grained, close texture, well flavoured, and nicely marbled, or veined with

fat. Diminutive as this breed is, their general weight being from twenty to thirty-five stone, yet, by attention to the essentials in breeding and managing thereof, such improvement has been made of late years, in point of weight, as to excite astonishment, as the following authentic fact will prove.

John M'Neal, Esq. of Colonsa, in the county of Argyle, in the west islands of Scotland, bred a Kyloe, which was fed by Tho. Chamberlain, Esq. of Skipton, in Craven, Yorkshire, and killed by Mr. Lawrence Moorby, of Chorley, Lancashire, in the year 1809; then only four years old, the four quarters of which weighed, seventy-two stone six pounds, 14lbs. to the stone; tallow, ten stone; and sold for the sum of fifty-five guineas.

Proportioning the quantity of milk to the size of the animal, some of the Kyloes give an abundant supply; being bred in the Highlands of Scotland, mountainous, rugged, and exposed to the chillings of the northern blasts, they are inured to hardships and severity; and consequently rendered eminently serviceable in cold mountainous situations: in fact, hardiness seems a constituent of their



A. Highland Coot or Galloway.



nature, and enables them to bear "the peltings of the pittanceless storm," without a murmuring low !

Many thousands of these are annually exiled from their favourite haunts, the Grampian hills ; pass through Yorkshire and other counties in large herds, and, if not purchased before, end their toilsome journey in the vicinity of the metropolis, indulged once more with a respite from fatigue, grow fat in smiling pastures, and finally find their way to Smithfield.

A very useful and handsome breed is the produce of a cross between the Kylloe and Short Horned, or Tees-water breed, this may with propriety be termed the poor man's breed, its size renders it within the compass of his purchase, perhaps more than any other. Another consideration is, the quantity of milk they give, in proportion to their consumption of food, and lastly, what is of the highest importance, they are favoured with an excellent constitution, and well adapted to the variable climates, which an island, like ours, is daily exposed to.

CHAP. VIII.

THE GALLOWAY BREED,

OR

POLLED CATTLE,

DERIVE their names, first, from the shire of Galloway, a district in the South-west of Scotland ; from whence they are said to have had their origin : secondly, from the appearance of their heads, as if polled, or deprived of those appendages, which other Neat Cattle have ; horns. They are a hardy, valuable breed—rugged mountains, and heathy moors receive them into existence, on which they commonly feed, until rising four or five years old, at which age, they are selected out from their associates, by their owners ; transferred over to graziers, drovers, &c. and,

lowing a last farewell to wilds that have witnessed each stage of their existence, they are banished forever from the native solitude, and freedom, to suffer their insults of goading drivers on a long journey, the same as the Kyloes, into the south of England, where they are fed, not only to satisfy the cravings of the necessitous, but to grace the tables of the wealthy citizens; self-recommended from the bright, clear colour of their beef, finely streaked with delicious fat throughout that portion which is termed lean, and from the quantity and richness of the fat attaching itself to the prime, or most valuable parts, this is the chief cause of their reception at Smithfield, and it may be reasonably presumed, that the London butchers know how to appreciate what is valuable in their profession, with as nice discrimination and true judgment, as a proficient in any of the sciences is capable of making conclusions, on what relates thereto; he likewise finds them better calculated for cutting up, agreeable to the long-established usage of their markets, than most other kinds; they are found to be excellent milkers, and what stamps their value more is, the richness of it;

for it generally happens, where abundance of milk is given, the quality is impoverished by the quantity; here however is an exception, nor does the benefit terminate here, for it is ascertained that, from a given measure of milk, much more butter is produced, than from the same quantity, the produce of other breeds; which is no little advantage at a time like the present, when the price of that article is so much enhanced. Their average weight may be taken at fifty stones, 14lbs. to the stone, though I have known some particular ones exceed seventy stones. These differ from other breeds, in being destitute of horns, though some of them possess two, but from their diminutiveness in size, and the loose manner in which they are attached to the head, one would be induced to think that nature had made them in sport, being neither useful nor ornamental. Their hides are in a medium, neither too thick, nor too thin; their constitution good, enabling them to suit different climates; and being of a hardy race, are well adapted to cold situations. An excellent cross may be attained from these and the Short Horns, or Tees-water breed.

CHAP. IX.

SUSSEX

AND

HEREFORDSHIRE CATTLE,

RESEMBLE the Devonshire cattle so nearly, that they may be considered as the same breed, admitting some little variations, arising from casualties; the principal difference consisting in size; the Sussex forming a medium between the Devonshire, which is the smallest of the three, and the Herefordshire, which is the largest: their colour is for the most part red; hair fine; and their skin perhaps thinner than any other breed, feeling fine and delicate to the touch: head and neck clean, bearing a just proportion to their bodies; their horns escape the extremes of long and short,

and incline, or bend upwards at the points; they are commonly well made in the hind quarters; the hips, rump, and sirloin, wide; but the chine disproportionate, being narrow; in the back they are tolerably straight, but their sides are defective in beauty, from a certain flatness observable therein; a globular form ranking the first estimation on that point; their thighs are in general thin, and if it is an advantage to have fine animals, with small bones, these might with judicious crosses soon be brought to possess that advantage, for they have smaller bones, than several other breeds, and I think might easily be improved, with care and attention to the choice of their bulls.

In these counties the Oxen are used for purposes of husbandry, and submit very patiently to the yoke of labour; like the Devonshire, they are admirably calculated for the collar, in which they work most commonly from three years old, to six and sometimes seven; at which age, freed from the trammel of slavery, they are admitted to fertile pastures, to fatten and repose at ease, which when accomplished, and ready for the butcher's use, weigh from sixty to one hundred stone, 14lbs. to the

stone. The Calves are generally weaned at about three months old, at which age they are turned out to provide for themselves on tender herbage.

These cows do not give so much milk as the cows of Suffolk, but they amply compensate for their deficiency in quantity by the excellent quality thereof; a good cow of this breed, provided it is well kept, will after being divested of her calf, produce from six to eight pounds of butter per week, for three or four months after the calf is taken away; and of skimmed milk cheese, double that weight; having just hinted at the cows of Suffolk, in a comparative estimate of their produce, and having said as much as is needful on the species under consideration, I proceed to treat of Suffolk Duns.

CHAP. X.

SUFFOLK DUNS,

WHICH name this species of Neat Cattle have acquired from the prevalence of the colour that obtains in this county, which is that of a Dun, or a mixture of brown and black; several conjectures have been given as to the origin of that breed, but that which appears to be the best supported by reason, and approaching nearest to probability, is the one advanced by Mr. Cully, who travelled through the greatest part of England, and visited Ireland, in search of knowledge in the different species of Neat Stock, and what appertains thereunto; this gentleman gives it as his opinion, that they are neither more nor less, than a variety of the Galloway breed, and accounts very rationally for their having

gained a footing in this part of the kingdom, so remote from their native mountains, by the partiality of the Suffolk and Norfolk feeders and graziers of them, manifested to them, from a conviction of their utility, and their fitness to correspond with such pastures and such climates as they would there meet with : the great connexion that has long been established between these graziers and the Scotch breeders, and drovers, having enabled the farmer, in the first instance, to make choice of such animals, out of numerous droves, as possess the great essentials constituting a good and valuable one of its kind, their specific characters are the same, even to being polled, or void of horns; varying in nothing but colour, which this gentleman ascribes to a partiality for a light dun, and which we all know may very readily be effected, even to the entire seclusion of any other colour, at least, so as to make a favourite colour predominant through a whole district, or county, which is here plainly demonstrated. Independent of all suppositions as to their original descent, or how they first gained an establishment there, those who are

in possession of them, derive great advantage from them in the dairy particularly, for though they are little, Mr. Young informs us, and his authority is veracity itself, that one of these cows in common, gives twenty-four quarts of milk per day; which is an amazing quantity considering their size, for the best short horns give little more, though so much larger; from the milk of these cows, is produced butter of such excellent flavour, as to stand unrivalled in the whole kingdom; though at the same time, the cheese made therefrom, sinks below mediocrity, in the same ratio, as the butter rises above it.

Mr. Cully's observation, that deep milkers, are very lean, very plain in appearance, and very big bellied, holds good in cows of this kind; these evidently appearing so, upon examination. The average weight of these cattle, when fed for the table, may be taken at about fifty stone, 14lbs. to the stone.

[CHAP. XI.]

LINCOLNSHIRE BREED,

NEXT presents itself to investigation, which on examination appears to be the same as abounds in Holderness; and if size alone constituted goodness, none in the whole kingdom, would be able to stand in competition with this breed, especially some years back; for the superiority of the Tees-water breed having evinced itself in almost every county of our island, has in a great measure exploded that long established, but erroneous opinion, that value alone consisted in an unwieldy animal, of ponderous weight, and gigantic stature, though many of these qualities were the effects of huge bones, comparatively of small value placed in opposition to the same weight of beef, of the finest and

densist texture ; and the breeders of this part of live stock, in this fertile county, are daily sacrificing prejudice at the shrine of reason, and find such benefit resulting from crossing with the Short Horns, just mentioned, that I am sanguine in my expectation of living to see Lincolnshire boast of valuable Neat Cattle.

I know that customs and habits, long established, are difficult to overcome ; but ours seems to be an age, when experience triumphs over superstitious notions, and theory gives way to practice ; from these I augur much good to the community at large, and great advantages to the farming interests of this county—one of which is, the riddance of that unpleasant black flesh from their beef, so long and much complained of, and known by the name of lyery ; those gentlemen, who have rose superior to bigotted partiality, know the truth of this assertion, and are rising superior in wealth to their neighbours, who obstinately persist in their formal plan of breeding without crosses ; for it is now known that, good bred oxen, will pay their breeder thirty per cent. more than the large boned ones will.

What less than downright stupidity can incline any man to propagate a breed, so much inferior to others, when with a little exertion and trifling expence, he can become master of a race, profitable in the highest degree? What may not be expected from a county, so eminently distinguished for rich pasturage? Surely it is reasonable to expect advantages of great moment to the public, since many opulent and enlightened farmers, have introduced bulls amongst their stock, of known celebrity in point of breed! The cows of this breed are very large, yield an abundant supply of milk; but are considered as slow feeders,

Some oxen of the Lincolnshire breed, at the age of five, or six years, have weighed one hundred and twenty stone, the four quarters; though the average weight may be taken at seventy stone, they generally weighing from sixty to eighty stone, 14lbs, to the stone.

Situated as the breeders of this county are, enjoying advantages from nature, which few others can vie with, and none surpass; a few years may witness them ranking at the head of their profession, if that spirit of industrious

emulation is encouraged, which has of late been excited, by men of enlarged minds, and great fortunes, rewarding the efforts of the diligent improvers of Neat Cattle, by paying immense sums for a single animal, as I have already shewn, when that animal has been approved of as perfect in its kind. They have two evils to remedy, neither of which are impossible to effect, but both within their compass to accomplish. A reduction in the size of their bones, and a total annihilation of that black appearance in the lean of their beef, when cut up for sale; and which at once bespeaks them descendents from the Holstein breed, which ought to be exterminated from every farm yard in Great Britain and its dependencies.

CHAP. XII.

THE
LANCASHIRE BREED,
OR
LONG HORNS.

I Shall not enter the list of disputants, to prove or disprove the opinion that has long prevailed, of this breed being the native, or original breed of this island; the establishment, or refutation of which, is not of any essential service to the farming interests of either a single district, or the whole taken collectively; I shall therefore proceed to identify their specific characteristics, and first, the length of their horns, is a leading feature; their hair too is very long, and close set; they possess firm and thick hides, their necks

coarse and thick, and what is generally termed leathery: a greater diversity of colour is observable in this, than any other breed, notwithstanding which, let what colour may prevail, one thing is remarked in the whole of them, namely, a white streak running along the back; they are in general deeper made in the fore quarters, though at the same time, lighter in the hind ones, than most other breeds; the cow gives much less milk than the Short Horns; but her keeper is recompensed in the richness thereof, which in this species stands eminently high—indeed most of the dairies of the Cheshire and Gloucestershire farmers, are supplied from cows of this kind, or at least from varieties springing therefrom, though inferior to them in point of size, and external shape or figure, arising perhaps from injudicious crosses. They weigh less than the Short Horns; but this is only relatively, for they outweigh that kind in proportion to their size; and when well chosen, or what is generally termed, well-bred, they manifest a disposition to fatten in a short space of time. They commonly weigh from fifty to sixty and sometimes seventy stone, the four quarters. I speak of the

oxen, and when fed for market. Under the head of Tees-water breed, or Short Horns, I assigned my reason for deeming them superior on the whole, even to this species; which no doubt, has its advocates; for they have long been considered as rivals in point of utility and profit.

Unwilling, in the least degree, to offend any man, or body of men, I leave the admirers of the breed in full possession of what appears to them, an impartial belief of their superiority; at the same time I would, as a friend to their true interests, recommend the Short Horns to their notice, from a cross of which, with some of their best Long Horns, I am confident would spring a race of handsome, useful and beneficial cattle; with much pleasure I hear, that some respectable gentlemen in Lancashire, overstepping the bounds of unmeaning partiality, have recently introduced some fine bulls, of the Tees-water breed, amongst their stock, as I am confident that success will crown the experiment; and amply repay any additional expence incurred in the laudable attempt to improve so advantageous a part of the farming department.

CHAP. XIII.

 THE
ALDERNEY BREED.

HAVING in a former page denominated one species, the poor man's breed; this, under present consideration, may with equal propriety be termed, the rich man's breed; for, from the delicacy of their constitution, and the weakness of their make, they are never likely to be brought into general use, in any part of our island; an old proverb will give the reason, namely,

"They would be more cost, than worship;"

For though they give milk of the richest quality, affording delicious cream, and fine butter, their produce would not compensate the farmer, for his trouble and expence, in

breeding, rearing, and keeping them afterwards; besides, their weak frames could endure few of the changes of climate to which some of our most noted counties for breeding are exposed; a sense of this, and the luxurious treat they furnish for the tea table, have induced our noblemen and gentry, to introduce them into their parks, and spare grounds, contiguous to their seats.

They possess one very good property, fineness of bone; the prevailing colour amongst them is a light red, or yellow; and their beef, though very fine in grain, and finely flavoured, appears tinged with the same yellow colour as their coat. This is a species which feeds very well, and becomes very fat; nor do any of them exhibit the least appearance of livery, or black flesh, when slaughtered for culinary purposes. What a contrast between this delicate kind of cattle and the little Kyles, or the Galloway breed of hardy animals!

CHAP. XIV.

BREEDING OF CATTLE.

IN this branch of the farming department, there are several rules which must be attended to, and observed with a scrupulous exactness, by every one who wishes to arrive at any excellence therein, without which his industry may go unrewarded, and all his labours prove abortive; whereas, on the contrary, by a due observance of them, an adventurer in this part of live stock, may, with perseverance, insure to himself a certain profit for the money he speculates with; which is more than can be said of the precarious fluctuations of trade and commerce in general, where-with men frequently are too often elevated in one hour, to the highest pitch of fancied greatness, and in the next, involved in ruin,

by some unforeseen casualty; or the duplicity of designing men! Whoever, therefore, proposes to himself emolument or fame, in the breeding of Neat Cattle, should impress it on his mind, that though number constitutes an essential part of the profession he is engaged in, yet it alone is not by any means the only requisite to insure success; for we frequently see farm yards filled even to excess, and the proprietor nevertheless, either through ignorance or carelessness, failing to derive those advantages from a plentiful stock which others are reaping from numbers comparatively small; but which are under the guidance of men of agricultural knowledge, practically applied to the science they profess to study.

Much, it must be acknowledged, depends on fodder; yet without judicious employment of it, much and great mischief may be done; it therefore remains to point out, what is necessary to produce the end proposed to himself by each breeder, who is anxious, not only to rank as such, but also to participate of every advantage in pecuniary matters, which he sees is to be derived from such a pursuit. Nothing, in my opinion, should be

more guarded against, than having too many beasts pent up together ; or which amounts to the same thing, having contracted narrow cow-houses, in proportion to the number of beasts to stand there ; it is not only inconvenient and unpleasant to the domestics employed about them, but irksome and injurious to the cattle ; amongst a great number of this species, as well as any other, some are sure to have keener appetites than their fellow inmates, in which case, the slowest feeders will be deprived of their just share of fodder by the more rapacious and greedy ; the sure effects of which must be, to those thus deprived of a sufficient quantity of food, a wasting away of the body ; lowness of spirit ; listlessness of motion ; and a decrease of daily produce in milk : to remedy this evil, if labouring under it, no expence should be spared ; and to guard against it, if your choice is still to be made, and you have the erection of them, let them be capacious and wide ; by which plan you may preserve the health of your stock ; when by extreme perspiration, produced by too great a heat generated in a small space, and denied the free admission of wholesome air, your cattle will become weak

and tender, unable to encounter a storm, and some of the more delicate, constantly under the hands of the Cow Doctor; let them therefore have wide and open stalls; so that they may constantly be at ease; without having to breathe so much warm and impure air, as must always be the case where they are crowded up together in a small or narrow space. Whoever has been much amongst cows, if he has paid the least attention to them in way of observation, he must have remarked the dislike they constantly evince to being wet, even in summer, when a kind atmosphere, or the benevolent sun, so soon can warm and dry them; be very careful then, that they are not incommoded by what appears a nuisance to them in the most favourable season of the year, for as they shun it in summer, they ought not to be exposed to it by any means in winter; that your cattle be constantly dry and clean throughout every change of season, is a point duly to be attended to, if you expect to secure to them health, or yourself profit; yet, when I say this, I do not intend to be understood, that they should be debarred of these refreshing showers, which invigorate all nature, nor that they should be smothered

up all the live-long day under cover, for fear of treading in a little water ; no, that would be as much in the other extreme ; but some are so negligent, or so unacquainted with the economy of the animals in question, as to suffer them to stand day after day, and month after month, in cold, damp situations, with little or no straw under foot, which might absorb a great deal of the moisture, and render it more clean, comfortable, and healthy ; great advantage accrues from having their houses well paved, observing to build them if possible on a gentle rising ground ; if not, have it paved in such a manner as that one side shall form a gentle slope, the situation of the beast's posteriors will determine which side it must be ; the intention of which is, to give a free passage to any water that might at any time, from intemperate weather, force its way in ; and to drain off the animal's urine, when voided on the ground ; which ought, if convenience will admit it, to be collected in a reservoir, as near to the spot as possible, from whence it may easily be laded away and applied to many useful purposes ; this procedure will insure a dry situation for your cattle, which is an object that should

never be lost sight of for a single day, though I recommend dryness, in such an especial manner; I nevertheless advise you to keep beasts cool in summer, and warm in winter; cool, but not wet! The plan I have just laid down, will keep them dry all the year round, and save both labour and expence; two great objects at the present day! Besides the cleanliness of appearance it gives to their coats, it adds vivacity to their eyes, and agility to all their motions; prevents numberless internal complaints, and makes their lives pass away in ease, unimbittered by what seems to be unpleasant to their nature; at least since man has domesticated them, and taken them under his immediate care and protection.

Though beauty of form is at all times allowed to be pleasing, even in the brute creation, and was, on the outset of improvement in the breed of Neat Cattle, studiously sought after, as the ultimatum of their efforts, length of time, and the high price of every article of consumption, have determined breeders to apply themselves to produce something of more real use, of more substantial value, than beauty alone; this their ingenuity

and industry have effected, and what was once courted for gracefulness of shape, is now prized for utility and profit. By care and attention, they have improved the prime, or principal parts, in weight and quality, in the same proportion as they have diminished the inferior or offal parts, this has properly been called, utility of form, abstractedly considered from beauty; and ought to be deeply engraven on the minds of all who intend to derive any advantage from breeding of cattle, as it forms a standard or criterion, by which the merits or demerits, of each separate species, may be judged according as they excel in the principal parts, or sink in estimation, by an overpowering preponderance of offal; and surely, he deserves well of his country, who by assiduous cultivation reduces the one to the lowest standard possible, and points out to mankind, the same unerring plan which he pursues: putting them in possession of a mode of procedure, big with utility, and the sure result of which is ample gain.

Having noticed that in the early stages of improvement, beauty alone was consulted; which gradually gave way to utility of form,

abstractedly considered from beauty; and which may justly be considered as the second principal of improvement; I shall now proceed to point out, what may reasonably rank as the third principal of improvement, and which has before made its appearance in the world, under the general name of improvement in texture of the flesh; the which deserves well the attention of all who are any ways concerned in the breeding thereof—this quality in live stock, though it may appear quite familiar to the butcher, who daily beholds the improvement made therein, as well as the consumer thereof, who has frequent opportunities of witnessing the progressive stages of improvement from coarse and open in grain, to close and compact, or dense and fine; yet it seems if it had hitherto eluded the observation of the grazier in some degree, and wholly to have escaped the notice of the breeder, till within a very recent period; now, however, the epoch is arrived, when it is clearly understood, that the fineness of texture or closeness of grain, in beef, does not depend on the size of the animal, furnishing such beef; but entirely on the breed; though till within the recollection of most men, a

contrary opinion prevailed, fixing the merit of such pre-eminence, on the ponderous bulk of the animal, though it is most manifest that such size, principally arose from huge bones, heavy and large indeed ; but only preferred by madmen or lunatics, to the renovating and delicious sirloin of beef, freed as well from coarseness of texture, as from that unpleasant sable hue, known by the term lyery, or black flesh.

Great as the foregoing improvements may have been considered, there yet remains another principle, which at the present day engrosses the attention of farmers and breeders in general, and ought in a particular manner to occupy the mind of the grazier ; that is, fat ; or more properly speaking, the fattening quality, by which is understood, an aptitude to become fat at an early age, and if well kept, not only to shew that propensity in early life, but to exhibit symptoms of increasing magnitude, in a short space of time, which is another quality, if not absolutely hereditary, is greatly dependent on breed, or a principle communicated from parent to offspring ; such quality, eminently distinguishing itself in the parent animal,

previous to the production of a third being; which principle, forming as it were, a constituent of their nature, or being so interwoven in their frame, may be relied on with much more certainty of success than if it depended on an extension of matter, forming an immoderate sized beast; the production of which, in a short space of time a combination of accidents, and sometimes a single casualty, may retard or totally prevent.

From a conviction of this truth it is, that the men who rank foremost in the list of English breeders, have arrived at such excellence in producing fat cattle at a very early age; observation and daily experience proves, that the utility and beauty of form, the quality of flesh, and its propensity to fatness are in the offsprings, the natural consequence of similar qualities in the parents; nor are instances wanting to prove that these four great and good qualities, have been found combined in an individual animal. I shall not combat that long-established opinion, that a bull should not be used in the same stock, more than three years, for fear of the relationship becoming too near; under an idea of the practice being irreligious, as some have

not scrupled to declare it ; but rest satisfied myself, in the belief of a contrary opinion, resting the ground of that belief, simply on this, that if man had not domesticated this species of animals, if he had not taken them under his immediate care and protection, but allowed them to indulge in native freedom, and to give and receive copulative embraces, where either choice or passion directed, that in that case, sire would copulate with its own female offspring ; and a male offspring with its own dam ; stimulated thereto by nature, in the prospect of enjoying a present good, nor would they be deemed unnatural ; nor can I reconcile myself to the idea of it being irreligious, merely because man has domesticated them ; the nature of the thing remains the same ; principles do not change, in order to accommodate themselves to human institutions, nor do the animals under such circumstances feel compunction, for that is a proof of rationality, to which man alone lays claim.

Were I inclined to enter a cavil therefore, with any man on the subject of breeding cattle, it would not be from an idea of any immorality attaching itself to what is termed

breeding in and in; but from a belief of the superiority that crossing has over it, for though some of the best-bred cattle, of the present day, are produced from an individual's own stock, lineally descended from each other, yet from that stock being numerous, and from judiciousness in choice of pairing the male and female, so as to let the most distant relations copulate together, this method approaches to crossing, as near as may be; and the advocates for a bull remaining not above three years in one stock, may here see their objection obviated; great numbers are of opinion, that continuing to breed from one stock for a greater length of time than that specified above, weakens and enervates the produce of such stock. But if such are not proof against conviction, their minds being warped by prejudice, they may see their favourite hypothesis confuted, by beholding living witnesses which can testify to the contrary in their own persons; these witnesses are a race of wild cattle, in Chillingham park, in the county of Northumberland; in which park, they have ranged at large for several centuries, without any intermixture, and Mr. Cully, whom I have often cited before,

does not hesitate to pronounce them an exceedingly hardy, healthy, and well-formed species of cattle; remarking at the same time, that from their situation and uncontrolled state; they must indisputably have bred from the nearest affinities or every possible degree of consanguinity.

Admitting the truth of the above observation, can any reasonable objection be made any longer, to breeding through the nearest affinities, conditionally, that is, supposing them possessing those four qualities amongst them, which we so ardently wish for, viz. beauty; utility of form; the quality of the flesh; and a propensity to fatten at an early age? I think cool reason, deliberate reflection, and existing proofs to the contrary, will warrant me in answering in the negative! Should our own stock not excel in these particulars, but rather sink below mediocrity, in the whole or any one of them, wisdom and sound policy suggests an exchange; for it is undoubtedly to be expected that the most perfect male and female, stands the greatest chance of producing an offspring perfect in its kind, agreeable to our notions of perfection in such like matters; indeed, it is an established rule, that

"like begets like," therefore, if the expence of procuring better stock, does not overbalance the proposed advantage to be derived from such change, never lose the opportunity of making such a purchase, if you wish to rank as a breeder of Neat Cattle! It is perhaps needless to add, that the degree of excellency obtained through these means, has astonished Europe, not only in the rapidity with which it has been obtained, but in the simplicity of the manner of effecting it, when properly applied.

A few years application to this improvement has put England in possession of a race of animals, at once the wonder and delight of all who either see them stalking at large in verdant pastures, or taste the delicious and substantial repast they afford, when served therewith from a fine sirloin. With what pleasurable sensations can an English breeder gaze on this part of his stock; when he reflects for what purpose he is fattening them; compared with the breeders on the Continent, who furnish bulls, for the brutal sport of the refined of both sexes, who can afford to pay to see the exhibition of a bull fight; at which

entertainments, if they can entertain any one, the poor animal irritated almost to madness, by goads, &c. in revenge for which, his horns often lacerate the poor deluded wretch, his antagonist; frequently mangling his limbs in a manner too shocking for description, and too often crushing him beneath his ponderous weight, to the transport of thousands, whose minds are kept in slavish darkness, by superstition, the effects of an illiberal, contracted, or false education. Insensibly led into the above digression, by placing before the mind's eye, one of my own countrymen surveying his live stock, and possessing a mind big with reflection, I have to claim the reader's indulgence for the insertion of it, and if he possess cattle of this description himself, I trust he will not be the worse for being informed, that his favourite animal is bred in some countries, for other purposes than the benefit of mankind.

That all good stock must be both bred with attention and well fed, is a truth, I think, universally admitted by men conversant with the subject; for my own part, I think it necessary in order to arrive at the acme of perfection in improvement, that

these two essentials should always accompany each other; for no man can reasonably expect to support a capital stock, unless he can insure good resources in point of rich pasturage, or nutritious fodder, and possessed of these, it would be equally absurd to support a breed of inferior stamp, when he might with the same resources, maintain an equal number of such cattle as would do him credit in any market or fair in England. The principal objects in the produce of which is, the greatest quantity of rich milk; and secondly, beef from the least quantity of food or produce of land in a given time. I have already noticed, that cows with the best disposition to fatten, not only to give the least milk, but soonest run off, or fail in giving their usual quantity; whereas a loose, open, ill-made one gives a larger portion, and continues to give it longer;—but is not so easily fattened, requiring much longer time to fatten in.

What, therefore, is the most desired amongst breeders, is the union of these two qualities in one and the same beast. But how to compass so desirable an object, seems for a long series of years to have baffled the efforts of the most judicious. However, I am

firmly persuaded in my own mind, and that not from surmise, but observation, that this union may be effected, by paying particular and proper attention thereto; indeed, a conviction of the truth of this observation, acted strongly on my mind, when I gave a decided preference to the Short Horns, or Tees-water breed over every other species; for I have witnessed in many instances amongst this valuable breed, the union so much wished for; having known several of them prove extraordinary good milkers, which when dry, manifested a disposition to become fat in a very short space of time. I give it therefore as my opinion, that, with as much care and attention to the attainment of this object, (making choice of cows selected from this particular breed, to try the experiment with) as have been bestowed on other objects in husbandry, that this great point may be gained; and that, not in a solitary instance, but be so firmly established as to make it in a few years characteristic of the species, and as much to be relied on, as has hitherto been the case with cows of a loose, open and ill make.

Various are the opinions that prevail,

respecting the different breeds of cattle, as likewise from whence the best stock proceeded; from men of profound knowledge in these matters, I have received information, that the North of Yorkshire, and the county of Durham, have for centuries produced the most valuable and useful breed of any other in the British isles; and indeed, if indefatigable industry, and assiduous attention thereto, are means calculated to produce such, the breeders in the parts just named, merit to stand at the head of the list of competitors; few, very few parts, are so particular in the choice of their breed, as they are in general in the North, by which I mean, beginning in the neighbourhood of the River Swale, and thence running across the county to Darlington and Durham; and of late years, some gentlemen of spirit and fortune, in some parts of Northumberland, have devoted their minds and purses to the improvement of Neat Cattle; nor have their praise-worthy efforts proved abortive; for I am credibly informed, by competent judges, that some parts of Northumberland lays claim to some of as fine cattle as any part of England, having purchased prime stock at a great expence from eminent breeders,

and knowing their real value, have paid every requisite attention to them since, so that in a little time we may expect to see the most happy effects result from that spirit of emulation, which has been excited in every part of England, amongst men of property, in this part of agricultural improvement; for there is scarce a county from one extremity of the isle to the other, but what is daily making advances in improvement of their live stock; every one seeming sensible of the great advantages to be derived therefrom, when once arrived at that perfection which experience teaches them is attainable; to accomplish which, I am proud to say, no sacrifice of time, of labour, or of money, is deemed too great! If we may form a judgment thereof, by the avidity with which beasts of celebrity are purchased, at prices unheard of in our forefathers' days; and the attention paid to them till ready to slaughter for the table.

CHAP. XV.

MANAGEMENT

OF

NEAT CATTLE.

HAVING expatiated a little on the breeding, I proceed to the management of these docile and useful domestic animals; which I propose doing in as brief and concise a manner as the nature of the subject and my capacity will allow; first premising the impossibility of laying down certain and definite rules, for the management of cattle, under every circumstance so as to suit all; locality of situation, and a thousand unforeseen casualties, presenting obstacles to such an undertaking; I must therefore content myself, and attempt to instruct my readers, with laying down

some general directions, such as I trust, will tend to render their stock healthy and serviceable if properly attended to, and regularly followed; regardless of former practices, unless such as will bear the test of scrutiny; reason and experience being the two umpires. Without any further preamble, I propose speaking on feeding and fattening cattle, for the purpose of which they are generally bought in the spring, in order to be ready for the butcher's use the ensuing summer; according to circumstances; or else about Michaelmas so as to be ready for sale, either in winter or the following spring; be careful to have them pretty forward in flesh at the approach of winter, and when that inclement season sets in, keep them up from its chilling blasts, and unpleasant damps, to both of which they have the strongest aversion; exercise a fostering care over them, in providing them either with good sweet hay, turnips, cabbages, &c. and they will reward your toil, and reimburse your purses, the first good market that offers an opportunity for you to part with them; I speak of such as are arrived at maturity, or full growth; but should you possess young lean cattle, you must

shew the same favour to them in point of good keeping; for they, by an increase of size, will repay you every expence for wintering; and may, by such a mode of treatment, be in a fit state to fatten the following summer. Such cattle as you intend to fatten for a winter or spring market, should be turned out to grass about September; and cows giving milk should be turned into rough pastures; the reason is obvious, by such procedure you preserve your fodder; but remember as soon as wintry snows darken the horizon, or nipping frosts clothe the ponds with ice, then is the commencement of your fostering care, drive them carefully before you to warm and comfortable stalls, attentively observing to keep them dry; good hay should now be given to such cows as are near calving; to such as have recently calved; or that give large quantities of milk, also to your fattening cattle. This must be done every morning and evening, in proportion to the quantity of rough grass, &c. that there may be upon the ground. But you should act more economically with respect to your lean ones, those that give but little milk,

straw may be substituted for hay to fodder them with; but here it requires a little finesse, and you should be careful to give them barley straw first, and oat straw afterwards; but you should be told that barley straw produces a deficiency in milk, therefore you must regulate the quantity you give to milch cows proportionately to the value of the milk they yield; if they give much and it is rich in quality, I should advise affording them hay, unless it is very scarce or very dear! Carrots may be given to cattle with great advantage; nor is it uncommon in winter to feed them with scalded malt dust! And in large manufacturing towns, where milk is sold so exorbitantly dear, it is a common practice to feed them with grains, they being proved to produce superabundant quantities of milk, which here is all that is sought after; the great demand for it amongst the lower class of people insuring a ready sale, if it only bears the name of milk. I do not mean by this to insinuate, that grains are no where else given them, but only to point out that they are productive of a deal of milk, for here they are given them to produce that effect, it always following as the sure result

of a known cause; but danger attends the practice, if carried to great excess, or continued too long in, for it causes them to rot.

When your pastures become bare, and fail to supply your stock with their accustomed fare, house your milk cows, and give them hay therein, as for your other beasts, they may be confined to the yard and fed on straw; but if circumstances will admit, it is much better to have two yards, each having racks and other conveniences to fodder them in, by which means those that are destined to eat straw can be kept totally distinct and apart from those that are to be favoured with hay. In feeding them, it is the best plan to do it often; observing to be sparing each time of serving them. You cannot be too careful in having the yards well sheltered from the severities of the season, causing them to be as dry as possible, in order to which, remove the straw and litter frequently out of the yard, replacing it with fresh dry straw, this will afford warmth and comfortableness to them, and serve to increase your manure.

It has long been a prevailing practice to introduce neat cattle and horses into the same pasture, without any restriction as to number

of the latter; but it is an evil which ought to be guarded against, for though persisted in, it cannot have escaped the observation of the attentive husbandman, that too many horses in a feeding pasture prove a great nuisance to horned cattle, by eating up the richest grass; here it is necessary to observe, that all fattening cattle as they advance in feeding, or increase in flesh, should be admitted progressively to better and more nutritious food; the reason is plain, for if not pursued, the beast when half fat will become stationary for a while, after which it will run off its flesh again, and be with difficulty raised again; which will in a great measure defeat the prospect of the farmer. In order to derive the greatest advantage in grazing cattle, it is advisable, if circumstances will admit, to turn them into good rich pastures, changing them from one into another repeatedly, for they delight in variety; and being admitted to full pastures they eat with avidity, fill themselves in a short time, lie down and indulge in supineness, and thereby rapidly increase in flesh, grow fat and soon repay you for your trouble, in affording you some fine nutritious beef, if slaughtered for your own consumption, or an

equivalent thereunto, if transferred over to the butcher to supply the demands of his customers. To a good judge it is no difficult matter to conclude with precision, whether an animal will become fat or not, and also to ascertain which parts manifest a disposition to become so more readily than the rest; this is effected, by submitting the hips, rumps, ribs, flank, breast, and in short, all the fattening points of the animal, to the touch of his finger and thumb! It is also easy on an investigation of a fat beast to identify the exact seat of such fat; because it is susceptible to the touch, on all the above-named fattening points. A good judge can readily determine too, by examining a lean beast whether it will fatten or not; or rather in which particular parts it will fatten, while in others parts it will not increase in fat.— Though this appears easy to the man of experience, it is nevertheless a difficult task to explain it in writing; on handling a beast, such a man would say, if it met his approbation, this cow, or bull, or ox, as the case might be, touches it nicely on its ribs, hips, &c. this idea is furnished from a certain pleasurable sensation, witnessed in the touch-

ing of the parts said to handle nicely ; springing from a conception of mellowness or pulp-like ripeness ; not because of its softness, softness being totally distinct from the mellowness here spoken of ! Numberless instances are daily to be met with, of animals handling soft and loose, but being destitute of that mellowness, or incapable of exciting an idea thereof to the touch, they are disapproved of by judges, and condemned as such that will not fatten, or at least, not in any degree of comparison with the others, or those that furnish a kindliness and pleasantness in handling them ; and in this alone is to be found the difference which determines the experienced farmer's opinion, resting his judgment thereon, as upon a sure foundation.—Whether you have few or many inclosures, carefully fence and shelter them ; and spare no expence or labour, to get them well supplied with good water, as it is of the greatest moment in hot sultry months of summer ; copious draughts thereof taken at discretion, prevent numerous diseases.

Many have been the disputants, and strong the debates, relative to the profitableness of feeding cattle ; some contending in favour of

them being fed in the house, while others prefer pasturage. Many experienced farmers have advocated each different mode, but may it not be reasonably asked, Does it not chiefly depend on conveniences, the situation and nature of the soil, &c. &c. ?

Stall-feeding may be the most advantageous where the land will produce good and plentiful crops of clover, lucerne, &c. &c.

Would you wish your cows to give a large quantity of milk, and at the same time to have it good, plentifully supply them with food, but not too much at once : grass, as it is the most congenial to their natures, so it is best food to answer this end, especially that kind of it that springs up without cultivation on rich dry soils.

When the season is such as to permit the cows to graze at ease throughout the day, let them indulge in freedom, and range the variegated pastures without controul or restraint ; but should the full blaze of the meridian sun incommode them, be it your task to afford them protection from its heat ; drive them to invigorating shades ; where, after resting a-while, and being allowed to ruminate, supply them in small quantities

with green herbage, fresh cut for the occasion.

When mild evening sheds its influence o'er the earth, lead them back to their favourite pastures, there to range till the succeeding mid-day sun calls for your kind offices to be again exercised to their comfort and your profit. Some cows which are abundantly fed, ought to be milked three times a day during some of the summer months, viz. early in the morning; at noon; and just before night fall, for it is a known fact, that if only milked twice a day, at a time when they indulge in succulent food, that they will yield considerably less milk in the same time, than if milked thrice.

Before I close my observation on this head, I would particularly impress it on the minds of all who keep cows, to watch with careful eye over their respective domestics, who have the milking of their beasts, to see that it be done carefully, properly, and regularly. Neglect in this particular, diminishes the produce of the dairy in quantity, and the quality of the milk will be greatly impaired, if the whole is not thoroughly drawn away in the act of milking, which careless

servants oft neglect to do—the milk so left in the cow's udder seems to be absorbed into the system, and nature generates no more than to supply the waste of what has been taken away ; so that if this lessened quantity is not thoroughly drawn off, it occasions a still further diminution in the quantity generated, till at last the animal would become quite dry, for this is the mode of procedure when it is intended to dry up a cow's milk entirely, without doing her any injury.—With this observation, I close the management of Neat Cattle, and proceed to point out the various diseases to which they are incident, and prescribe such remedies for the cure thereof, as I have, through a long course of practice, found the most beneficial results from, and such as are the most to be depended on.



EVERY FARMER,

HIS OWN

COW DOCTOR.

PART SECOND.

VARIOUS and contradictory as men's opinions in general are on any given subject; there appears to be one, which gains the universal assent of the sage, the philosopher, the poet, the divine, and the husbandman; it is acknowledged by all, that health is the greatest of human blessings, riches and honours can make no compensation for the loss of it; any expence is cheerfully contributed, and any fatigue undergone to remove disease and pain; and as it is thus important to man, the health of animals, whose services

contributes to his wants and necessities, is scarcely less so; it is not merely inconvenience alone which is the consequence of their disorders in cattle, but frequently, essential and irreparable loss; it is well known, that medical science has been of late years applied to this object with considerable attention and success: animal anatomy and physiology, as well as that of the human subject; have been cultivated with more than common industry; the causes and symptoms of the diseases of cattle have been studied and arranged, and the method of treatment respecting regimen, as also the method of cure simplified and rendered far more rational, than when the greater part of this useful science lay buried amongst the rubbish of unintelligible jargon, or confined to scholastic idioms; so as to exclude the major part of mankind from any knowledge of what so nearly concerned their best temporal interests. But men of enlarged ideas and generous minds, have at length broke through the custom that so long prevailed, and have not only brought forth the hidden treasures of the ancients, but have enriched and benefitted the world with their own discoveries in medicines, the result of

actual experiments; which must ever be superior to the surmises of theory.

Profiting by the labours of others, and the long experience I have had amongst the cattle I have already described, and treated of in the former pages, I flatter myself I am enabled to add somewhat to the stock of knowledge, and to communicate here a few things, at least, which have hitherto escaped publicity; on that account I hope they will at least merit a trial, and I doubt not, but an impartial one, will stamp them favourites with a discerning public.

In this part of my work, I have as much as possible avoided technical phraseology, aiming more at useful information practically obtained, than an elegance of diction in communicating that information. It is in this part too, where I trust my labours will be found particularly useful to those who are unacquainted with the diseases of cattle, especially to the poor man, whose cow is frequently almost his all, it must be acknowledged that such an one may be situated where no practitioner is resident in the neighbourhood, or if so, cases of exigency may occur, where such practitioner is not at hand,

though immediate assistance be necessary; such an exigency the volume I now offer to the public is meant to supply, and it will be found to answer that purpose, if its contents are duly and carefully attended to. Nor does its advantage terminate here; numerous accidents may be prevented by a strict adherence to the means which it recommends, or if happening may be remedied; multitudes of formidable diseases easily removed at their commencement, and thus the lives of many valuable animals preserved, to the satisfaction and benefit of their respective proprietors.

I am well aware, that under some circumstances, cases may, and do very frequently occur, where an ignorant man and a trivial remedy effect much good; when at another time, and under certain circumstances, the most powerful medicines administered by the hand of the skilful will avail nothing; nay, even sometimes seem to defeat their own purposes; under these impressions, and with these sentiments I submit the subsequent pages to the perusal of the candid and unbiassed mind; trusting, that none will be disappointed; but very many of my country-

men benefitted by their publication, which is the proudest honour I shall ever aspire to, and which will amply compensate for the many tedious hours devoted to the subject, in order to bring it into its present, though perhaps imperfect state.

FELON.

NUMEROUS as the disorders are to which Neat Cattle are subject, none are more common than the Felon. Treatises have been multiplied and obtruded on the public, expressly treating on this disease, but with what success I leave the candid reader to judge, when I inform him, that though this disease is the most common of all that visits this useful race of animals, and though it is in the mouth of every one, yet few, very few can explain its nature, or know any thing about the causes of it; that I may be more successful in conveying right notions of it to the uninformed, I shall endeavour to be as concise and plain in my observations on it as I am able, leaving the rest to the judgment of my readers. It is frequently induced by ill treatment and hardships, to which they are

exposed by thoughtless masters, but much more frequently by careless and unfeeling domestics! When it is considered, that obstructed perspiration is almost in every instance the effect of sudden transitions from heat to cold, and when it is also considered, to what sudden atmospherical changes islands are in general subject, and Great Britain in particular, and when I inform my readers that the felon is caused by obstructed perspiration, our wonder will in a great degree subside at the commonness, and frequency of the disease under consideration in our island. Under this malady, the natural evacuations become irregular; the hide tense, dry, and unpliant; in short, nature seems deranged throughout the whole system, and threatens the most alarming train of disorders, if not speedily remedied and restored to the enjoyment of a free circulation of the fluids. Whenever the foregoing symptoms manifest themselves, the beast is pronounced afflicted with the hide felon, which certainly is the forerunner of many fatal diseases.

To mention certain rules for the prevention of such a formidable disease, would

indeed be a great acquisition to the farmer, grazier, and thousands besides, but I am greatly afraid that is almost impossible ; what I conceive to be the most likely way to prevent it, is paying great attention to the beasts under your care, especially in the article of food, which ought always to be good and nutritious, and when confined to the house, should be given them with judgment and regularity ; the house should be so situated as to admit a free current of air to pass through it, which is a great promoter of health to the whole of the animal kingdom. Experience teaches us, that horned cattle are the most healthy when kept in airy, open situations ; I speak of their houses : observing to keep the backs free from wet. In this opinion, I know I shall be opposed by many who have embraced a contrary one ; but as long as I have reason on my side, I trust I shall be pardoned if I persist in it : and that reason does favour my opinion, we need only consider how loathsome it is to ourselves, to breathe the same air over and over again ; if this holds good with respect to man, who in general is much more used to confined situations than the brute race, why not with equal propriety,

at least apply it to those beasts which nature seems to have formed to bear inclement seasons better than man?

Next take into consideration, the sudden transitions to which they are exposed, after being pent up in a close house, the pores of the skin open by warmth, and frequently in a high state of perspiration, to be driven out to encounter a boisterous, cold, and chilling wind, or stand for hours exposed to the attacks of rain, or in the most favourable point of view, see them come smoking from confinement, glad to breathe the free air again, but ignorant of the consequences, lie down on cold damp ground; and then say, is it much to be wondered at, if such beasts are very liable to be attacked by the felon? Whereas a free passage for the air would expel that already breathed, furnish the lungs with a fresh supply, prevent forced or unnatural perspiration, and forbid the existence of that transition so very injurious to their well being!

I am sorry to be under the necessity of remarking, that scarce a disease occurs to cattle, but what the generality of men professing to be cow doctors, term either the

hide felon, or the heart felon, though it is much to be lamented, that few of them are able to explain the nature or causes of either of them ; this is a bold expression, but it is true ; nor can all the invectives they may bestow upon me for the assertion, ever make me retract it, until by their practice they convince the world to the contrary. If it was not from profound ignorance, or downright and unjustifiable carelessness, how are we to account for the administration of the most uncouth medicines, mixed up frequently without so much as a knowledge of the virtues of the separate drugs employed, or weighing over the effects likely to be produced from their combination ?

In the beginning of this disease, I agree with one, that Nitre joined with Sulphur will produce good effects. Nitre is eminently serviceable to beasts as well as man ; it quenches thirst ; abates febrile heat ; promotes the natural evacuations by urine and stool, gently opening the belly : it is of manifest service in guarding against inflammations, and when repeated in small quantities, it is excellent for recovering the cud. It may not be amiss to remark, that whatever medi-

cine is given to horned cattle, it should be of a diuretic nature, or possess the power of provoking urine.

Besides the symptoms already stated, and which were said to denominate the hide felon, the animal is commonly sore behind the shoulders; sometimes losing the cud; the nostrils are dry with no dew, giving a less quantity of milk than common, and that on a sudden; these latter symptoms indicate a bad disposition of both fluids and solids, principally arising as already stated, from obstructed perspiration, for the cure of which,

RECIPE.

Ginger in powder,	2 ozs.
Sulphur,	1 oz.
Glaubers Salts,	6 ozs.
Nitre,	2 ozs.
Crude Sal Ammoniac,	4 drams,

Give the above in three pints of ale gruel for one dose, adding thereto 4ozs. of treacle and 4ozs. of butter. To be given the last thing at night, the beast having previously fasted two hours; it must also fast the whole of the night on which it takes it; next morning let it have a mash of malt, or bean meal, gruel, &c. this medicine claims particular



attention, cleansing the stomach of all nausea; restores lost appetite; gently opens the pores of the skin; promotes a regular discharge; and is a good diuretic. It may be repeated the third night; should the hide not be sufficiently loose after twice repeating it, the following may be had recourse to.

Liquid Laudanum,	....	....	....	1 oz.
Crude Sal Ammoniac,	....	....	....	$\frac{1}{2}$ oz.
Mint Water, one gill.	....	....	....
Treacle,	....	....	....	4 ozs.
Butter,	....	....	....	4 ozs.

Let these be given in three pints of ale as before. It is admirably calculated to open obstructed pores, and give free egress to perspiration. Should the disease prove obstinate and resist the first dose, repeat it as occasion requires.

The following prescription is well worth the notice of all who keep cows, &c.

RECIPE.

Ginger, anise, carroway and fennel seeds, all in powder, of each two ounces, mithridate 2 ozs. bruised juniper berries, 6ozs. grains of paradise and gallingall in powder, each 1oz. and flowers of sulphur 2ozs. mix all these in powder together, divide the whole into two

equal parts, each of which forms a dose, to be taken in three pints of ale, in which is incorporated 4ozs. of treacle, and 4ozs. of butter; two nights after give the other dose in the same manner, repeating it if found necessary. These powders produce a regular discharge of perspirable matter, and remove heavy slime adhering to the stomach, intestines, &c. which never fails to injure them, by overloading them; they promote a flow of animal spirits; restore the natural heat, and recal lost appetite. If the appetite is bad and the breath offensive, the beast labouring at same time under a costive habit of body, which is commonly called the windy gargle, I would advise,

Barbadoes Aloes powdered,	1 oz.
Ginger and Aniseed powdered,	$\frac{1}{2}$ oz. each.
Oil of Mint,	1 dram.

Administer these in three pints of ale and one pint of penny royal tea, to which as before, add 4ozs. of treacle and 6ozs. of butter, repeat two days following, if occasion demands it.

It is necessary to observe, that in any disease where costiveness prevails, glysters of

the nature of the following are particularly serviceable :

RECIPE FOR A GLYSTER.

Common Salt,	....	....	....	4 ozs.
Butter or Hogslard,	....	....	....	4 ozs.
Water Gruel,	....	....	....	1 gallon.

Inject this warm, observing the same precaution, and following the directions as given under the head Windy Colic.

ON INFLAMMATION.

INFLAMMATION is defined to be a swelling and redness of the part said to be inflamed, attended with pain, and more or less deprived of its common actions or functions.—The inflamed part has a sense of throbbing pulsation, giving to the nerves an acute sensation of agonizing pain; and the blood when drawn therefrom, discovers a buff coat on the surface of the glutinous part separated from the rest of the mass. It is caused by the application of intense heat or cold, too quickly succeeding each other; any acrid matter producing irritation, external violence, &c. There are three ways in

which inflammations terminate, viz. resolution, suppuration, and gangrene. By resolution is meant, a return of the matter into general circulation.

Secondly, Suppuration, which signifies, that the matter collected, being too gross for absorption, acquires a peculiar nature, in consequence of the part assuming as an effect of inflammation, a sort of secretory power.

Thirdly, Inflammations may terminate in a gangrene, which implies, that the texture of the vessels is so completely destroyed from extreme action, and consequent decay of the vital principle, that instead merely of its thinner parts, the blood in its gross state is effused into the cellular membrane, where a change generating putridity ensues.

The cure of topical inflammations, wherever seated, consists in removing the increased action of the system, and taking off the irritation from the vessels of the parts affected. The first indication requires a strict adherence to the antiphlogistic regimen, which consists in bleeding, and avoiding all irritation; this is to be effected by a low spare diet, composed chiefly of good grass, with

frequently two or three quarts of limeseed pottage, in which may be given half an ounce of nitre, as often as the pottage is administered ; at the same time if the complaint is in the udder, or any other part that happens to be inflamed, use the following fomentation :

RECIPE.

Sugar of lead, one ounce, dissolve it in one pint of distilled vinegar, to which add, three pints of soft water, eight ounces of camphorated spirits of wine, and two ounces of liquid laudanum. Shake the whole well together every time you make use of it, which is best done by dipping cloths in a little of it, and keeping the affected part constantly wet therewith.

LAMENESS IN THE LIMBS,

OR

JOINT FELON.

NEAT CATTLE are sometimes afflicted with lameness in their joints, limbs, &c. owing to an impure state of their blood, which in this case, assumes a gross and sizey consistence, thereby clogging up the passages

of the vessels, and preventing a free circulation of itself, so necessary to the health of animated nature. This is termed the Joint Felon, and is divided into two kinds, the Acute; and Chronic; the necessity of this division arises from the different treatment required to effect a cure in the two distinct afflictions.

The acute kind abounds most in the sanguine temperament, and depends much on locality of situation, being peculiar to a mild climate, and attacking cattle at the vernal and autumnal quarters, accounted for from the vicissitudes of heat and cold, or the alternate and sudden change from one to the other, more sensibly felt in spring and autumn, than at any other time of the year. The acute kind is generally attended with inflammatory fever, leaving behind it a degree of pain, and a stiffness in the joints; from which this malady takes its name.

Though all diseases are in themselves evils, and as such to be dreaded, yet my opinion of this is not unfavourable, unless an affection of some of the principal organs attend it; and the crisis is either by sweats, hemorrhage, and a diarrhœa, or an eruption

on the skin : for unlike all other inflammations, in this suppuration very rarely happens.

Dissections for these complaints seldom occur, unless complicated with others, but when from the violence of the fever, which in some instances have proved fatal, and dissection followed, the same appearances are exhibited as described in inflammatory fevers.

The peculiar phenomena observable in the joints under this disease, are thickening of the membranes, and adhesion and gelatinous effusion ; while in the chronic kind, we often meet with palsy of the affected part in this disease ; copious bleeding is necessary, at least you may bleed pretty plentifully, giving the following mixture :

RECIPE,

Ginger in powder,	....	....	....	2 ozs.
Antimony finely powdered,	....	....	....	1 oz.
Sulphur,	....	....	....	2 oz.
Grains of Paradise,	....	....	....	1 oz.
Liquid Laudanum,	....	....	....	$\frac{1}{2}$ oz.
Treacle,	....	....	....	8 ozs.

Mix the whole together, and give it the beast in three pints of good ale, at night ; taking care to keep it warm ; in the morning

give a mash of malt; repeat the dose in two nights, or as occasion may require.

Much good may be expected from rubbing the joints twice a day with this mixture:

RECIPE.

Oil of Turpentine,	4 ozs.
Rectified Spirits of Wine,	2 ozs.
Tincture of Euphorbium,	$\frac{1}{2}$ oz.
Camphor,	$\frac{1}{2}$ oz.
Olive Oil,	6 ozs.

Dissolve the camphor in the turpentine, mix and shake all well together, and it is fit for immediate use.

It may not be amiss in this place to prescribe a drying drink for a large cow intended to be fed, after taking two quarts of blood, give the following in two quarts of old milk:

RECIPE.

Yellow Rosin in powder,	8 ozs.
Nitre in powder,	$1\frac{1}{2}$ oz.
Madder in powder,	2 oz.

Repeat this drink in ten days time, observing to let the cow fast for five hours both before and after giving it, then turn her into the best feeding pasture, if the season will admit, but if it is in winter, keep her on the

most nutritious provender. Long experience convinces me, that this method is equal, if not superior to any other practised; other methods obtain, one of which I insert for the use of such as think proper to make a trial thereof.

RECIPE.

Take Spirits of Wine,	....	....	4 OZS.
Tincture of Cantharides,	....	....	$\frac{1}{2}$ OZ.
Crude Sal Ammoniac,	....	....	$\frac{1}{2}$ OZ.
Oil of Turpentine,	....	....	$\frac{1}{2}$ OZ.

Mix all together, and rub the loins and the milk veins therewith; bleeding occasionally.

OBSERVATIONS ON WHAT IS COMMONLY CALLED FELON IN A COW'S UDDER,

WHICH is troublesome in the extreme, to those cattle to whose lot it falls to be afflicted therewith, and too frequently proves a severe loss to the grazier, in whose possession such afflicted cattle happen to be. It is a disorder generally produced by obstructed perspiration. Cows which have given a large quantity of milk are the most subject to it, though

I have known more than one instance of heifers, which never had a calf, suffer under this complaint. Anatomists have by dissection discovered, that this disease originates on the uppermost part of the udder, where there is a small spongy substance, commonly known by the name of *Nattle*, which appears gangrened or inflamed in a high degree, soon spreading itself nearly over the whole udder: a quantity of matter is next suppurated which attaches itself to one or more of the quarters of it. When the disorder is arrived to this stage, bleeding is highly necessary, at the same time giving the following drink, from which much good will result. *

RECEPE FOR FELON IN THE UDDER.

Glauber's Salts,	1lb.
Nitre in powder,	4 ozs.
Crude Sal Ammoniac,	1 oz.
Ginger in powder,	4 ozs.

* A Gentleman grazier in the North of Yorkshire, who has had great practice in fattening cattle, advises as a preventive of this disease, to amputate close to the udder, the teats or paps of such cows, amongst those that are feeding for the butcher, which you have reason to suspect are likely to have it; this process causes a discharge of matter, which prevents any severe inflammation taking place; and he assures me, that his feeding cows have all done well, and that none of them have fallen victims to the complaint for several years.

Infuse these in six pints of bitter tea, made from any of the following herbs, viz. camomile, wormwood, penny royal, &c. When the whole are properly dissolved, shake the mixture very well up, divide the whole into two equal parts, one of which is sufficient for a dose, and is to be given at night, repeating the second dose the night following.

In the mean time, rub the affected part with the following mixture, having previously washed the udder perfectly clean with soft soap and water ;

RECIPE.

Rectified Spirits of Wine,	....	4	ozs.
Spirits of Sal Ammoniac, ....	....	4	ozs.
Oil of Turpentine, ....	....	2	ozs.
Common Oil, ....	....	6	ozs.
Camphor, ....	....	4	drams.

Dissolve the camphor in the spirits of wine, and mix the whole together for use.

Be not sparing of your labour in rubbing this mixture well upon the affected part, two or three times a day ; and I am confident of success crowning your efforts to remove the malady, by dispersing the hardness of inflammatory swellings, or promoting suppuration,

or a discharge of pus. Should matter collect in any part of the bag, give it vent by means of puncture, and in order to encourage the discharge, keep open the perforation, by the introduction of a dock root, letting it remain there till the part is nearly well; and the animal relieved from pain.

CRAPULA; or EXCESS in EATING.

THIS, if not discovered in time is a very dangerous disorder, and has proved fatal to thousands, before timely aid could be afforded. It is the effects of a surcharge of the stomach, for it is well known, that if cattle after being on small allowance or being pent up in confinement, and on their liberation therefrom, are turned into a pasture of sweet fog clover, or of rich succulent grass; or are admitted to feed on turnips, &c. &c. or, if not turned designedly into these their favourite places of luxurious feeding, but prompted by the prospect or the appearance of a delicious repast, break through fences and enter by force, where they see their best good be-

fore them; in either case the effect is the same: long denied the pleasure of indulging their appetites in such sweets, they devour all before them with the greatest voraciousness, overloading the stomach, producing flatulence and a distension of the paunch; the stomach's upper orifice becomes closed, the action of ruminating, or chewing the cud ceases, and of course fails to produce its desired effects; thus situated, the air now becomes rarified by internal heat, rushes from the stomach into the intestines, there causing a large swelling in the body; now is the crisis of the disorder—immediate relief must be afforded, or death will ensue. In such cases, the most prevailing practice is, to make an incision with a knife into the large bag, situated in a line betwixt the hip and the first rib, about six inches below the loin: Should your suffering beast prove a cow, this operation must be performed on the contrary side to where you sit to milk her.

When you have perforated the bag, introduce a quill open at both ends, or a small ivory or smooth bone tube, through which the noxious air will soon make its escape, and give the animal instant relief; when reduced

to its natural size, cover the wound with a plaster made of the white of eggs and wheat flour; or of pitch, &c. I do not advise this method on all occasions, but only where the the beast is likely to drop down. In common cases, where the animal is tolerably strong, I should rather recommend the taking from it two quarts of blood, after which, give half a pound of common salt, half a pound of butter, or one gill of linseed oil, or hogslard, in three pints of spring water; this is greatly to be depended on, it removes ropy slime, which is a great hindrance to their getting rid of the air, which so much incommodes them. Give the above medicine quickly, and a ready cure will be effected. Some make use of a turnip rope, introducing it into the stomach, and alternately drawing it up and down, forces the rarefied air to escape; but I greatly prefer the last mentioned mode of cure, to the use of the turnip rope.

I have in my practice, often witnessed cattle much swoln with eating too much bean meal, or barley chaff, &c. after having previously suffered from eating too large quantities of fog clover, &c. in which case, I always prescribed a repetition of the above

medicine, and gentle exercise till the body was reduced to its usual size, but if it has not been discovered till it is too much exhausted to digest the quantity taken into the stomach, make an incision into the great bag, large enough to admit your hand, by which means you may bring away all the indigestible food ; having done which, cover the wound with the plaster as before directed, keeping the animal for two or three days on soft food, such as linseed gruel, &c. and all will go well. I am of opinion that any expert person may perform the operation with ease and safety.

INFLAMMATION OF THE LUNGS;

OR

FOG FEVER.

COLD North Easterly winds, wet fogs, or heavy dews, with their sudden changes, are the chief causes of this disorder in Neat Cattle ; their effects on the animal economy are obstructing perspiration, and affecting the neighbouring vessels, so as to fall entirely upon the lungs. In this disorder, such food as

requires the action of the cud, should be given with a sparing hand ; smooth oatmeal, or linsseed gruel, seasoned pretty well with salt, is sufficient food in this, or any other inflammatory disorder ; yet, if the animal chews the cud, a little hay may be given, keeping it in a quiet posture, breathing fresh air, is of the utmost importance and highly necessary. The symptoms by which it manifests itself, are breathing with great difficulty ; a close cough ; the pulse hard ; eyes very dull and languid ; the hide frequently tense ; putting out the tongue ; ropy phlegm falling from the mouth, and the extremities cold, especially about the ears, the roots of the horns, and the legs ; but the pulse here, is not so certain a sign as in the other inflammation, and it is remarkable, that this disease in unaccompanied by pain.

For the cure of this disorder, if the animal is discovered on its first attack, two quarts of blood may be taken away ; but should it have made such progress, as greatly to oppress the beast's breathing ; or shew signs of bearing a load at its breast ; or having a close cough, more blood may be taken away ; but be cautious not to weaken the powers of nature by

too frequent a use of the fleam. After blood letting, give the following medicine :

RECIPE.

Emetic Tartar,	3 drams.
Nitre,	1 $\frac{1}{2}$ oz.
Squills,	1 dram.
Treacle,	4 ozs.
Butter,	6 ozs.

Mix these for one dose, and give it in three pints of strong penny royal tea ; repeat the same three days successively, if occasion require. Cover the beast with warm clothing, not forgetting to use dry frictions on its legs ; a blister on each side of its breast will prove efficacious in increasing circulation.

RECIPE FOR A BLISTER.

Hogslard,	4 ozs.
Oil Origanum,	$\frac{1}{2}$ dram.
Spirits of Turpentine,	$\frac{1}{2}$ dram.
Cantharides, in fine powder,	$\frac{1}{2}$ oz.

Mix well, and rub it in behind the shoulders. When the fever runs high, and difficulty of breathing is observed, you cannot do better than give in the morning the following

RECIPE.

Foxgloves well prepared and well powdered 2 drams, nitre 1 ounce, and gruel one quart, or,

Glauber Salts,	....	....	....	8 ozs.
Nitre in powder,	....	....	....	2 ozs.
Foxgloves prepared,	....	....	....	1 dram.

Give it in penny royal tea, and if the beast be strong, repeat it in twelve hours.

The following is a good cooler and preserver of the lungs :

RECIPE.

Wine Vinegar,	....	....	....	1 gill.
Linseed Oil,	....	....	....	1 gill.
Barbadoes Tar,	....	....	....	1 oz.

Mix the yolks of three eggs with the tar, beating them well together ; to which add the other ingredients, give the whole in one quart of gruel, twice a day.

In this disorder, glysters should be given three or four times a day. See page 114.

INFLAMMATION OF THE LIVER.

IN this disorder the liver being much swelled, compresseth the stomach, diaphragm, and the neighbouring viscera of the lower belly, stops the circulation of the juices, the generation and excretion of the gall, as also digestion; produces numberless bad symptoms—the jaundice, with all the diseases depending upon it; for the liver receives the blood on its return from almost all parts of the abdomen, and is the chief instrument of digestion.

The signs of this distemper are several, the first evinces itself by a heaviness in the hypochondrium; this is chiefly known by the beast tossing about very much, because the liver is stuffed with blood, retained by the inflammation hindering its circulation; the second is a heavy pain, when the inflammation is in the substance of the liver, because the substance thereof is not of so nice a sense, or so sharp pricking when the inflammation is in the membrane, or superficial part of the liver, which is more sensible than the substance, the common symptoms are difficulty in

breathing, a preternatural swelling about the short ribs; an intermitting pulse, a perpetual load in the abdomen, with other symptoms, common also in the jaundice. Inflammations of the liver are always full of danger, commonly ending in dropsies or decay of the body, unless timely prevented.

RECIPE.

Barbadoes Aloes in fine powder,	6 drams.
Castile Soap,	2 ozs.
Aniseeds in powder,	2 ozs.
Ginger in powder,	1 oz.
Nitre in powder,	1 oz.
Butter,	6 ozs.
Treacle,	4 ozs.

Dissolve the soap in three pints of penny royal tea, and add the other ingredients, to be given for one dose.

At the intervals of four hours, give three pints of gruel, adding $\frac{1}{2}$ oz. of salt petre; or,

RECIPE.

Turmeric,	1 oz.
Nitre,	2 ozs.
Castile Soap,	2 ozs.
Glauber's Salt,	6 ozs.

To be given as before for one dose, and repeat it the day following.

INFLAMMATION of the KIDNEYS,

Is frequently accompanied with fever, and may be known by a quick pulse, great pain in the region of the kidneys, the urine being evacuated in small quantities, with a nausea, &c. sometimes being very high coloured, at others very pale; when thick and muddy it is a good sign. Its breath is frequently very strong and offensive; when the beast turns round, it appears to have great pain, and stiffness in the loins. It is generally caused by hard exercise, or obstruction in the urinary passages; such as gravel, stone, &c. or any thing which forces the blood into these passages; in this complaint bleeding is of infinite service, much good will also accrue from the use of the following

RECIPE.

Salt of Tartar,	....	....	....	....	1 oz.
Juniper Berries,	....	....	....	....	4 ozs:
Nitre,	....	....	....	....	2 ozs.
Venice Turpentine,	....	....	....	....	$\frac{1}{2}$ oz.
Balsam Capivi,	....	....	....	....	1 oz.

Mix the turpentine and capivi in the yolks of three eggs, and give it in three pints

of ale gruel, adding thereto $\frac{1}{2}$ lb. of coarse sugar, and 4ozs. of butter ; repeat the dose every day, till a cure is effected, observing to give at the intervals of every four hours, half an ounce of nitre, and a little common salt, in two quarts of gruel.

INFLAMMATION of the STOMACH.

BEFORE we can have a just knowledge of the disorders to which the stomach is subject, it will be necessary to understand in what manner digestion is performed, that operation falling to the lot of the stomach to effect.

Comparative anatomy informs us, that all animals which chew the cud have a plurality of stomachs, some two ; others three ; and Neat Cattle four ; the food passes down the first into the great bag, upon the internal surface of which are a vast number of small blunt pointed processes, giving to the whole a general roughness, this surface extends to several times the size of the paunch or bag. The food here is sufficiently macerated by means of liquors secreted into the bag, and the force of its muscular coat ; it is then passed

by the gullet into the mouth, where it is rendered more minute by mastication, which action is called ruminating, or chewing the cud, in order to accomplish which nature has furnished them with eight grinders, contrived with wisdom for the purpose. After rumination, the food is sent down into the second stomach, the gullet opening indifferently into both, it ending exactly where the two stomachs meet—for the conveyance of it into the second stomach, with more facility, nature has bestowed a gutter perfectly smooth, with rising edges, which leads it thereinto, from thence to the third, and finally to the fourth or last. It is worthy of notice, that the creature can direct the food into which stomach it pleases; some tell us the drink goes into the second, to determine which, the curious or inquisitive may satisfy themselves by causing the animal to drink immediately before it falls a sacrifice to the butcher's knife. The second stomach which is the anterior and smaller, is called the honey-comb, from its conformity in appearance to that production of the bees; in this as was said before, the food is further macerated; from hence it is urged forward into the third, known by the

name of *mányplies* or manyfolds, because the internal surface thereof, rises up into a great many folds; first there are two long ones on each side, and within these, two shorter are inscrted, in the middle there are numberless glandular grains like millet seed, diffused all over the folds; from hence the food passes into the fourth, known by the name of the maw, in this last stomach the chyle is formed, after which the food passes immediately into the intestines, this is the stomach which when taken from the calf, and properly prepared, becomes so useful in the dairy to curdle milk with. It is observable that calves do not ruminate, as long as they are fed only on milk, though the action commences as soon as they begin to eat solid food; it is also observable, that as long as the calf subsists entirely on milk, the food passes immediately into the fourth or last stomach.

The rumination does not take place till after the animal has eaten a pretty large quantity, after which it is sure to lie down if it conveniently can, and then begins to chew, though this is the common and general way, yet the process will go on in a standing posture. It is very astonishing to see with what

rapidity a ball of food ascends from the stomach, to undergo mastication, which when effected, is swallowed again, and is succeeded by another such ball, till the whole mass of food eaten has undergone the same operation, though this to a superficial observer, may appear very strange, yet anatomical discoveries explain it in an easy manner, from the structure of the oesophagus or gullet, which is proved to have one set of fibres calculated for bringing up the grass, &c. and another set for conveying it down again.

Rumination serves one valuable end, by it much more virtue is extracted from vegetables than when passed immediately from the stomach, after one mastication into the intestines; consequently, animals which chew the cud, are contented with much worse provender than horses, &c. and a smaller quantity suffices them.

An inflammation of the stomach is a dangerous disorder, and generally proceeds from noxious substances taken into the stomach along with the food; the chief indications are, great and constant pain, which it resists with great energy; and continual vomitings when it proceeds from poisonous herbs, &c.

When this symptom therefore appears immediate relief should be sought, or a very short time will put it out of the power of medicine to effect a cure or preserve the animal's life. The first thing to be done in this disease, is to bleed pretty freely, regardless of the smallness of the pulse, for they will be found to rise after each bleeding.

Blisters applied to the regions of the stomach, should succeed repeated bleedings, and frequent and large emollient glysters should be injected; when the violence of the disease is abated, opiates may be exhibited in this manner to check the tendency to vomiting; these too are the only means to be depended on to obviate a disposition to supuration and gangrene, the last of which proves fatal, defying the power of medicine and the efforts of art.

In this disease, I have known ale-wort given in large quantities produce very good effects, when most other medicines have failed. I have also witnessed happy effects from the following

RECIPE.

In the first place give one ounce of salts of tartar, or one ounce of volatile salts, dissolved in one pint of vinegar; when the above is mixed, it must be given in its fermenting state, no time being allowed after mixing it.

Two hours after you may give the following

RECIPE.

Gentian Root in powder,	2 ozs.
Ginger in powder,	2 ozs.
Glauber Salts,	4 ozs.
Nitre in powder,	2 ozs.

The last prescription may be given in three pints of camomile, or horehound tea, to the whole add, 4ozs. of honey. It is necessary that the beast should fast six hours after taking it. Elixir of vitriol one ounce, to be taken for one dose, is also a good medicine. Or,

Barbadoes aloes six drams, ginger two ounces, salts of tartar one ounce; to be given as before directed.

Having spoken much in favour of glysters in this complaint, the following one may not prove unacceptable to my readers:

RECIPE.

Smooth Gruel, made good,	...	1 gallon.
Common Salt,	.... ..	4 ozs.
Linseed Oil,	.... ..	1 gill.
Liquid Laudanum,	.... ..	$\frac{1}{2}$ oz.

Having frequently proved the efficacy of this glyster, I can recommend it with confidence; inject it warm, and repeat it two or three times a day.

JAUNDICE, or YELLOWS,

CONSISTS in a suffusion of bile: its symptoms are chiefly denoted by the appearance of its eyes; it quickens the pulse; a costive habit of body is its constant attendant, and an unusual languor or indolence prevails; the urine deposits a sediment, and the other evacuations are likewise tinged with bile, except the fæces, which much resemble burnt clay, and always of a certain consistence. Symptoms such as the above evidently indicate a morbid quantity of bile in the mass of fluids, induced either from a redundancy thereof, or from obstructions of its passage into the

intestines, producing the same effects. A pressure of tumours situated in the neighbouring parts may cause obstructions, especially connected with the liver; the presence of biliary calculi in the gall bladder, or its ducts; or spasmodic affections of the biliary ducts are productive of obstructions.

The first is confirmed by its occurring in consequence of an enlargement of lymphatic glands; humours of the mesentery and omentum; distension of the intestines, or schinosity of the liver, and this last is known by its long continuance, and the feeling of the liver itself; in taking a view of its causes, we may be enabled to form an opinion as to its termination, thus: if it proceed from a schirrous state of certain glands, to hope for a cure is almost to deceive ourselves, as it but very rarely happens. But as it occurs from this cause only in aged animals, its attack in general is less to be dreaded in young ones. It is difficult however to know when its existence proceeds from calculi, or from spasm; in the latter, we may in general hope for success, but should a complication of diseases, such as fever, inflammation of the liver, &c. attend upon the animal at the same time, a cure is

much more doubtful and uncertain. Animals dissected in a jaundiced state, discover in general, as has already been observed, a diseased state of the liver, gall bladder, and parts contiguous, connected with the secretion of bile; in this disease bleeding rather weakens the subject than affords relief; much benefit may be expected by the administration of the under

RECIPE.

Barbadoes Aloes, in fine powder,	6 drams.
Calomel, * 	1 dram.
Ginger in powder, 	1 oz.
Castile Soap, 	2 ozs.

Make the above into a ball and give it for one dose, wash it down with a pint of strong ale, repeat the same in three days or occasionally, giving the animal warm water for two days following, as the calomel requires care. Or,

RECIPE.

Madder, 	2 ozs.
Turmeric, 	2 ozs.
Venice Turpentine, 	1 oz.
Castile Soap, 	2 ozs.

* The Calomel must be given in a solid mass, otherwise it will sink to the bottom in liquids.

Mix the turpentine with the yolks of three eggs, and give the whole in camomile, horehound, or dog-standard tea; repeat every other day if necessary.

In the Jaundice large quantities of eggs are proved to be very serviceable, and should be given from ten to fifteen at one time.

BLOODY URINE; or RED WATER.

I apprehend this disease is a species of jaundice, though the urine is much deeper coloured than is commonly observed in that complaint; it is always the same disease, and its symptoms are uniformly the same, from which it is reasonable to infer, that proper medicines may be administered with success.

It may not be amiss to remark, that cattle are more subject to it in summer than in winter, and that those cattle which feed upon coarse, rough, sour grass, bad water, &c. are the most liable to its attacks, indeed since the superior cultivation of land that has taken place in England, it has not been so common as formerly: it has been observed to proceed too from atmospherical changes, as from hot

and dry weather, suddenly becoming cold and hazy, attended with piercing easterly winds : I have known it frequently induced too, from a change of pasturage, the animal being driven from rich, luxurious herbage, to a scant pittance of inferior food ; however let it proceed from what cause it may, it certainly is a very dangerous disorder, occasioning the death of thousands of valuable cattle ; but it is a lamentable truth, that though many fall a sacrifice to it, many more die in consequence of the ridiculous nostrums prescribed, and given by ignorant practitioners, who in general administer one at random ; if that fails, another diametrically opposite quickly succeeds, and so on, till the poor animal is reduced to the last extremity ; and then the man who has professed himself a Cow Doctor, begins to look around him for relief, from the fortuitous advice of surrounding spectators, if any ; if not, from the very man who is to pay for his inadvertent prescriptions. I am sorry to make this remark, but the practice of too many requires it.

Many symptoms of this complaint indicate an obstruction of the bile, which being forced back into the circulation, and thence

secreted into the urinary passages, may perhaps by irritating them, give origin to this disease. The most prevailing symptoms are, they generally forsake the herd amongst whom they have been used to associate; their coat or hair sets, or inclines the contrary way; they shew an almost constant disposition to ease nature by urine, but void very little at a time, what they do part with however is of a blood red colour, from which circumstance the disorder takes its name; they hold their tails more erect than usual, their backs assuming the same appearance; if the subject be a milch cow, their milk is suddenly dried up, at least it disappears on a sudden, for the most part they are troubled with a diarrhœa or looseness, and in general are very dull and languid. When once seized with this complaint great attention should be paid to them, and they should be indulged with good and generous treatment; oatmeal and linsseed in gruel should be frequently given them, seasoned well with salt, and a pretty good quantity of butter or bacon fat shred small and joined therewith, forms nutritious and good support, given in the quantity of two quarts every four hours, and at inter-

vals, one quart of fresh earth finely sifted, in order to free it from stones and other heterogeneous bodies, is accounted a specific for it! The good to be derived from this last article, probably arises from it depriving the stomach of certain acids, which conspire against its well being; be that as it may, it certainly assists very materially to forward the act of rumination, and helps also the powers of digestion; hay, grass, &c. should be given sparingly, unless the animal cud freely.

The water voided in this malady should be particularly noticed, and the medicines prescribed should be adjusted according to the appearance thereof.

Glysters are of essential service, and ought to be repeated two or three times a day, they chiefly operate as a preventive to costiveness, or what is commonly called the lakeburn, which generally takes place in the last stage.

In this complaint I would advise the following

RECIPE.

Roach Alum in fine powder,	....	4 ozs.
Green Copperas powdered ...	....	1 dram.
Castile Soap,	.... ....	2 ozs.
Balsam Capivi,	.... ....	1 oz.
Venice Turpentine,	.... ....	$\frac{1}{2}$ oz.
Nitre,	.... ....	1 oz.

Make a strong decoction of the herb called dog-standard, in two quarts of which mix the foregoing drugs, adding half a pound of sugar, and 6ozs of butter. The whole to be given if the cow, &c. be strong and large, let it fast for four hours after taking it, and if occasion require it, repeat every twelve hours.
—Or,

Take madder 2ozs. roach allum 4ozs. nitre 2ozs. bole armenian 4ozs. glauher's salts 6ozs. give these in two quarts of good ale gruel for one dose.

The following has proved effectual in desperate cases :

RECIPE.

Juniper Berries bruised,	....	....	3 ozs.
Roach Allum powdered,	....	....	2 ozs.
Bole Armenian powdered,	....	....	2 ozs.
Spirits of Turpentine,	....	....	4 ozs.

Mix the above for one dose, in three pints of old milk made warm. If the water is not clear the following morning, repeat the medicine.

It sometimes occurs that from extreme affliction the animal becomes exceeding weak, inducing shivering pains, in which case, the

following excellent medicine may be administered.

Infuse two ounces of the best peruvian bark, or for want of it, make a strong decoction of oak bark ; take one pint, and add one bottle of red port, mix with it one pint of gruel for one dose, repeat the same once a day until recovered.

Prepared foxgloves have great powers in every species of the jaundice, but require care in the use of them, small as the quantity may seem, 2 drams is a strong dose, by making a fair trial of the above medicines, and observing the above treatment, I am persuaded every intended purpose will be answered, at the same time may be given occasionally, ten or twelve raw eggs, shells and all ; they have a good effect.

No time should be lost between the symptoms of this disease evincing themselves, and the application of some of the aforesaid remedies. But should you be destitute of the major part of the drugs therein specified, and live too remote from a druggist to get supplied at the moment of attack, I would advise the use of the following articles, being

so common, as to be kept nearly in every house :

RECIPE.

Common Salt,	....	....	....	....	8 ozs.
Nitre in powder,	....	....	....	....	2 ozs.
Roach Allum,	....	....	....	....	4 ozs.

The salt is to be put into an iron pot and exposed to the heat of a very hot, clear fire, keep stirring it for the space of three minutes; when cool, immerse it in two quarts of gruel, adding the other two ingredients pulverized, this forms one dose.

COLIC,

Commonly called Gripes, or Inflammation of the Intestines,

Is of two kinds, one called Flatulent, by reason of a distension of the intestines, produced by wind, in the same manner as air fills a bladder; this kind of colic is never attended with fever; the other called the Inflammatory, which is always accompanied with fever, and a quick, low, soft pulse; the latter is by far the most dangerous, and may be known by the following

symptoms: a settled uneasiness, which betrays itself by the animal no sooner having lain down, than rising up again; striking their bodies with their hind feet, at least attempting to do it, indicative of that place being the seat of pain; with their heads or horns they frequently butt whatever comes in their way, their evacuations by stool are very unsettled, sometimes costiveness prevailing, at others a diarrhoea or looseness, accompanied with violent twitching pain, &c.

Colic frequently proceeds from cold, or eating coarse sour vegetables, or any thing which creates acidity in the stomach. When seized with this complaint, blood-letting may be practised with good effect, take to the amount of two quarts away, and give the following

RECIPE.

Castor Oil,	....	....	....	....	6 ozs.
Liquid Laudanum,	....	....	....	....	1 oz.
Camphor,	....	....	....	....	1 dram.

Mix these for one dose, to be given in three pints of ale gruel, adding 8ozs. of sugar, repeat the dose every four hours until the animal appears better. Or,

RECIPE.

Linseed Oil,	...	...	...	...	1 pint,
Oil of Mint, ...	...	...	...	...	2 drams.
Camphor, ...	...	...	...	...	1 dram.
Nitre, in powder,	...	...	...	...	2 ozs.

Mix and administer for one dose ; this is a very good prescription for the windy colic.

Take common salt 8 ozs. oil of turpentine 1oz. for one dose, give as above.

In all colic complaints, or where there is irritation in the bowels, glysters are of great service.

RECIPE FOR A GLYSTER.

Take smooth gruel one gallon, common salt six ounces, linseed oil one gill, treacle half a pound.

First, let a small hand be passed up the fundament, in order to bring away the hardened dung, then inject the glyster warm. A towel must be kept close to the fundament for a few minutes to keep the glyster in, and repeat every four hours or as occasion requires.

A large beast bladder makes the best glyster bag, with a smooth pipe 14 inches in length. Where a number of cattle are kept it ought at all times to be in readiness.

COUGH; or HOOSING.

WHEN a beast is afflicted with a continual hoosing, as it is termed, it exhibits nearly the same symptoms as manifested in inflammations of the lungs; cattle just recovered from the fog fever are the most subject to its attacks.

Anatomical researches have proved, that in this disease, different tumours are formed in the lungs, which obstruct the breathing, and cause a ropy slime to fall from the mouth; the following mixture may be expected to give ease,

RECIPE.

Laudanum,	4 drams.
Vinegar of Squills,	1 oz.
Spirits of Sal Ammoniac,	$\frac{1}{2}$ oz.
Honey,	4 ozs.

Mix and give it for one dose in three pints of pennyroyal tea. Or,

RECIPE.

Barbadoes Tar,	1 oz.
White Wine Vinegar,	1 gill.
Linseed Oil,	1 gill.

Mix the Barbadoes tar with the yolks of three eggs, then add the other ingredients for one dose, give it in three pints of gruel, and repeat once a day until the beast gains relief; this is a good prescription for the gripes, cough, &c.

LOCKED JAW,

Is as dangerous a disorder as any that afflicts cattle, the jaws are completely stiff and immoveable. When a beast is attacked with this troublesome complaint, I would advise as the most eligible plan to dispose of it to the butcher. It may proceed from wounds of the nerves, or from perspiration being suddenly obstructed; or from poison, &c. the symptoms are invariably the same, let its cause be which of the three it may, for the cure of which in its first attack, take away two quarts of blood, and give one ounce and a half of liquid laudanum in a gill of warm ale; when this medicine cannot be given with a horn, I would recommend the use of a long small tin pipe, in the shape of a postman's horn. The introduction of which

into the mouth, towards the throat prevents a waste thereof, and much benefit may be expected from rubbing each side of the jaws towards the ears, with strong blistering ointment, repeating the same process in twenty-four hours if occasion demands it. Be sure to keep the animal warm, in a comfortable cow-house, and administer good nourishing glysters, of an opening and laxative nature. I have witnessed beneficial results from white hellebore powder being thrown up the nose by means of a quill or small tube. Some highly commend the use of the warm bath, but great care should be taken of the animal, if this is had recourse to, as many valuable lives have fallen a sacrifice to inattention in this particular—by the warm bath, made use of for cattle, is meant blankets soaked in warm water, and laid upon the beast, so as to cover it over in every part, to be renewed two or three times a day.

INFLAMMATION OF THE BRAIN,

CALLED

FRENZY, or STAGGERS,

In some parts goes by the name of "Turn in the Head." We cannot affirm with the same certainty of the cause of this disorder, as we can of most others; it may proceed from the stomach, &c. sometimes a small bladder filled with water is discovered in the upper part of the scull, the same as is seen in sheep. This bladder renders itself perceptible to the touch of the fingers; when its existence is clearly ascertained, lose no time in making an incision with a sharp knife, in a triangular form through the skin, laying it pretty well open, having effected this with your knife, you cut the bladder or bladders, if more than one, entirely out, then take the actual cautery, or hot iron, and destroy the roots of those bladders, wash the parts with a little spirit of wine, and turn the skin over again, giving it a stitch with thread, and lay a pitch plaster over the part, by which means it will soon unite; the symptoms are frequent turning round, the eyes look red and appear

vicious, a restlessness is very evident, sometimes to such extent as to render them ungovernable, they shew tokens of fear at any thing in their way, and frequently and suddenly start—this malady frequently proves fatal in a few days; no time therefore should be lost before assistance should be sought and afforded it.—On examination, should it be found to proceed from the brain or the stomach, bleeding is absolutely necessary.

RECIPE.

Epsom Salts,	....	....	....	....	12 ozs.
Nitre in powder,	....	....	....	....	2 ozs.

Mix for one dose, and give it in two quarts of gruel; the day following give

RECIPE.

Barbadoes Aloes finely powdered,	1 oz.
Ginger in powder,	2 ozs.
Salts of Tartar,	1 oz.

Mix for one dose, and use gruel as above, at intervals administer two quarts of horehound or camomile tea.

MILK FEVER,

PUTRID, INFLAMMATORY, &c.

VARIOUS opinions prevail respecting this disease, its symptoms are evidently of the putrid kind. The animal's breath is strong and offensive, frequently belching, severe costiveness; urine varies in quantity, sometimes being abundant—the disorder generally begins very suddenly; the beast, as if shot, drops at once to the ground, becomes convulsed, the fits frequently returning. Sometimes it appears quite at rest, though at others raging—the convulsive pains return, sometimes every half hour; the nerves are much affected. At the first dropping down of the animal, it is deprived of the use of its limbs, and remains unable to rise until an abatement of the fever takes place, which sometimes continues from twelve to forty-eight hours. The milk ceases to flow; in order to restore which, an attentive domestic ought to draw the paps every half hour; when it returns, and increases from a small tea-cup full to a pint, there is hopes of a recovery; or if it obtains

a regular passage there is also hopes, for it is a good symptom.

I have known a beast recover, after the low or under jaw has dropt, and remained so for ten hours. In this disease, the manifolds are of a burning heat, from the first attack, the beast ceases to chew the cud, and on examination, after death appears inflamed to a high degree.

The first step towards effecting a cure, is to abate the fever, and convulsion fits, at least to afford ease. All medicines prescribed in this complaint should be of an opening nature. It has been observed, that linsseed tea given before and after calving, is a good preventive; it is a good practice after calving to give 1 ounce of nitre, salts, &c. instead of hot cordials which are too frequently given. The stomach is generally so putrid and stinking, as to cause a nausea and loathsomeness, on repeating the medicine.

To correct which, give one ounce of salt of tartar, it will also be of service before giving the medicine. Glysters ought also by all means to be often repeated; and much good may be expected from the following

RECIPE.

Emetic Tartar,	2 drams,
Nitre, in powder,	3 ozs.
Castor Oil,	1 pint.

Give in two quarts of gruel for one dose, adding half a pound of coarse sugar; the beast ought to have a handful of juniper berries put into its mouth every two hours, proving excellent for recovering the cud.—
Or give

RECIPE.

Epsom Salt,	1 lb.
Nitre powdered,	2 ozs.
Butter,	8ozs.

In two quarts of pennyroyal tea.—Or,

RECIPE.

Glauber Salts,	6 ozs.
Barbadoes Aloes,	1 oz.
Anniseeds,	1 oz.
Ginger,	1 oz.
Oil of Mint,	1 dram.
Linseed Oil,	1 pint.

Give it in two quarts of gruel, at intervals give three pints of gruel, seasoned pretty well with salt.—Or,

Take camphor 3 drams, crude sal ammoniac, 1 oz. nitre 2 ozs. treacle 1 lb; rub the camphor well with sugar, and mix the whole in two quarts of gruel for one dose.

POISONS.

EXPERIENCE convinces us, that several herbs are poisonous to Neat Cattle, the eating of which proves fatal to existence, such are different species of crowsfoot, henbane, hemlock, jack in the hedge, &c. Spring is the season when cattle frequently fall victims thereunto, and it evinces its malignancy by a large swelling in the body; immediately succeeds a violent looseness attended with great sickness; a quick low intermitting pulse; vomiting; the skin assumes a yellow hue; if external, a sanious matter issues from the wound, and death frequently follows in one or two days; to prevent which, three different indications arise; the first, is the removal of the poison, which is best performed by sucking the part,* which may be done without the least injury to the person so employed; the second consists in destroying the wounded part, by the actual cautery, or changing its state by the application of strong alkaline salts, or other caustics; the third indication is accomplished when the two former have been neglected,

* If in the Human Species.

by emetics, and by procuring a strong determination to the surface by sudorifics, or such means as will best procure perspiration ; volatile alkali has been employed, and the spirits ammonicum succinatum of the London Pharmacopeia.

Bleeding should be used, and purging medicines given, such as salts of tartar, glauber salts, &c. but if these are not at hand, give common salt, olive oil, &c.

The poison of vipers proves fatal sometimes, but the poison must in that case be conveyed into the system by the infliction of wounds, which may be known by the part swelling, its appearance at first is red, from which it changes to a livid colour, extending itself to all the neighbouring parts; the animal displays a sense of acute pain ; the bites of several species of small insects, in the warmer climates are often troublesome, sometimes fatal; but with us, specifics in abundance are sufficiently known, so as to render the assistance of medicine unnecessary.

DIARRHŒA, or LOOSENESS,

Is often occasioned by excessive hard exercise, the cause may arise from obstructed perspiration, and not unfrequently happens from being fed too much, and too long on hot grains; exemplified past doubt in and about the metropolis, where the chief food of cows nearly the whole year consists of grains, which, as I have elsewhere observed, renders the animals productive of large quantities of milk, a desirable object in London, and by proportionate quantities of grass, hay, &c. keeps them in a condition so as to be ready for the butcher at the shortest notice, but it is to be observed, that cattle cannot bear this food more than three years at the farthest, after this period, if persisted in, a continual looseness is sure to attack them, at least it commonly happens so; grains are a food productive of flatulency, and if too long given, cause an acidity in the stomach, so as greatly to impair, if not totally destroy the powers of digestion! The most prevalent symptoms are, excrements thin, greasy and frothy; food ill digested; hide adhering

very close to the back; a continual wasting away of the flesh, the general appearance of the countenance, dull and languid. I am of opinion, that many authors err in giving a bad appetite as a symptom, for I have repeatedly witnessed animals in the most inveterate looseness, even in the last stage, both eat and chew the cud, when incapable of standing.

In order to effect a cure, it must be your first concern to restore the tone of the stomach, for which purpose administer stomachic and strengthening medicines; your next object must be to open the pores of the skin; and lastly, bring the looseness to a termination.

If the disorder has not prevailed too long, close perseverance in the administration of the following medicines, will ultimately insure success and often afford immediate relief:

RECIPE.

Gentian Root, in powder,	4 OZS.
Gallangall,	4 OZS.
Grains of Paradise,	4 OZS.
Sulphur,	4 OZS.

Mix and incorporate these very well together, make a strong decoction of oak bark,

of which take three pints, divide the above mixture into three equal parts, one of which is a dose in the decoction, repeat it once a day for three successive days, then give the following

RECIPE.

Ginger in powder,	....	....	....	2 ozs.
Allum pulverized,	....	....	....	2 ozs.
White Chalk,	....	....	....	2 ozs.
Gentian powder,	....	....	....	1 oz.
Liquid Laudanum,	....	....	....	1 oz.

Mix for one dose in three pints of a strong decoction of the leaves or buds of briars, repeat the medicine for four days. After the use of the aforesaid, the following cheap and valuable mixture may be given with success; take the inner rind of oak bark, 2 lb. four handfuls of briar leaves, boil these in two gallons of water about half an hour, strain for use, after which take one quart and dissolve in it 2 ozs. of gum arabic, this is for one dose, give it every other day, adding thereunto half an ounce of the powder of gum kino, and 60 drops of oil of vitriol.

The following is a most excellent drink, and will be found very efficacious to stop

a looseness, and to strengthen and heal the internal parts.

RECIPE.

Diacordium,	1 oz.
Grains of Paradise,	1 oz.
Liquid Laudanum,	1 oz.
Spirits of Hartshorn,	1 oz.
Tincture of Japan Earth,	1 oz.

Give the above in one pint of red wine made warm. The best food is mashed oats and hay; in summer give the oats at grass, and fatten the animal immediately; for if the complaint returns, I believe it is out of the reach of medicine to effect a cure.

FOULS;

OR

Disease of the Feet,

Is a disorder very common amongst horned cattle, of which there are four different kinds; the first I shall notice, is known by the name of the Stinking Foul, proceeding from an impure state of the blood, it having the appearance of siziness; this kind breaks out between the hoofs or heels and

has a very offensive smell ; if any quantity of matter is likely to be discharged, the animal is generally very lame, to cure which, wash the insides of the hoofs very clean with warm water, wiping the foot afterwards very dry with a linen cloth : this done, take a cow-tye, and draw it briskly five or six times between the hoofs, then with a probe dipt in butter of antimony, anoint the internal parts of the hoofs, or those parts which are affected ; butter of antimony is a good and safe caustic, and of great service ; after it has done its office, lay a little healing ointment or bacon fat on the part, wrapping over it a linen cloth or some tow to prevent the admission of dirt, which proves a great hindrance to its healing if not kept out. This method of treatment generally effects a cure at twice dressing ; it is often found necessary to give the beast a drink ; for which purpose the following will be found of service to purify the blood :

RECIPE.

Ginger in powder,	....	....	....	2 OZS.
Sulphur,	....	....	....	2 OZS.
Antimony,	....	....	....	2 OZS.
Nitre,	....	....	....	2 OZS.
Administered in three pints of gruel.				

The second kind is an inflammation in the foot, and upwards to the fetlocks, by some called Bowling Foul, or Stake Foul, &c. and is attended with a hot swelling. I have experienced very happy effects from the application of a poultice made of oatmeal, bran, or turnips, renew it warm twice a day; when the inflammation is abated, with a sharp knife cut the skin on each side of the internal parts of the hoofs, touching the same with butter of antimony as occasion may require. Sometimes a cure appears similar to a gristle, in which case should butter of antimony prove insufficient, lay upon the healing ointment or bacon fat, some red precipitate and blue vitriol powdered, dressing as before directed.

The third kind is a caries or rottenness in the bone, arising chiefly from improper treatment; it too is attended with a hot swelling, and fungus flesh is apt to make its appearance; do not too suddenly apply the knife, but rather allow it time, and draw it by precipitate and blue vitriol as before mentioned; use also the poultices. When you have bared the bone, you may dress with tincture of myrrh, and tincture of euphorbium, they will always keep it perfectly clean.

I have witnessed much evil from hasty operations of the knife, and the pernicious application of oil of turpentine, thereby thwarting their own designs, it being a stimulant to the growth of proud flesh. The method of treatment I have prescribed, I am bold to say, will with proper attention cure any Foul whatever. When the foot is properly cleansed, it will soon heal by dressing with spirits of wine and tincture of myrrh; the addition of a little oil of vitriol will cause it to heal with more safety.

The last kind is distinguished by the name of the Wart Foul, making its appearance sometimes on the foreside of the hoof, at others on the under side behind the hoof. Take a sharp knife and cut it close off, sear the part with a hot iron, touch the root with oil of vitriol; turpentine will soon take out the fire, as it is termed, that is, ease the pain occasioned by searing—should proud flesh appear, butter of antimony will entirely destroy it.

A very good ointment for the feet of cattle, where fungus flesh appears, is made by mixing equal parts of gun-powder, salt petre, and soft soap.

THE

BLAIN; or, HAWKS or HOCKS.

THIS dangerous disease attacks cattle generally at the back end of winter, or commencement of spring; high feed is assigned as the probable cause of it; be that as it may, it mostly evinces itself by swellings about the eyes and nostrils—sometimes the fore legs, and the baron are affected, and the beast appears much indisposed. The legs are cold and benumbed, and a quantity of ropy slime falls from the mouth and nostrils. Bleeding is found very useful, but if it cannot be readily practised, some person should cut the nostrils, ears, &c. much good may be expected to accrue from the following

RECIPE.

Common Salt,	....	....	....	....	6 ozs.
Butter,	....	....	....	....	6 ozs.
(or instead of butter)					
Oil of Olives,	....	....	....	....	1 gill.

Give in three pints of water, blending two eggs therein. It is necessary to be very cautious to keep the animal from water while taking the above medicine. Two quarts of

blood is the quantity to be taken away as soon as possible, if found practicable; by strict attention to the above prescription you may expect a recovery in four hours.

SCAB, or SCURF,

Is a disease of the skin, produced sometimes from being overheated by driving, surfeits, &c. sometimes 'tis the effects of bad food, and frequently of lying wet, the predominant symptoms are a bad staring coat, the skin covered over with scabs, which have a meally appearance and lie thick amongst the hair. A continual itching, judged of from the animal rubbing itself against any thing which it can conveniently get at. As it is infectious, the sooner a remedy is procured the better. Take two quarts of blood, and make use of the following

REMEDY.

Wash the beast all over with soft soap and water, take a curry-comb and curry it, after which, wash it all over again with the following mixture. Take one quart of soap lees, or

half a pound of pot ashes, half a pound of tobacco, and six quarts of old urine, half an ounce of corrosive sublimate, boil these gently over a fire, when cold add thereto half a pint of oil of turpentine, once washing with this mixture will effect a perfect cure; observing to keep the beast warm for three or four days. It is necessary to give the following medicine :

RECIPE.

Barbadoes Aloes in fine powder,	6 drams.
Ginger in powder,	2 ozs.
Sulphur,	1 oz.

This is calculated for one dose, given in three pints of good ale gruel; three days after, give two table spoonfuls of the following mixture every night for a week or ten days :

RECIPE.

Flour of Sulphur,	4 ozs.
Salt Petre,	4 ozs.
Antimony,	4 ozs.
Cream of Tartar,	4 ozs.

Pulverize all well together, and give it in a mash of bran or malt. For a beast that is not severely afflicted, the following wash will be found efficacious : take half a pound

of tobacco, 4 ozs. of crude sal ammoniac, one lb. of soft soap, which boil in four quarts of old urine, when cold, clear off the liquor, then add thereto half a pint of oil of turpentine, and it is ready to be applied as before directed.

ANGLE BERRIES;

Or what is commonly called An-Berries,

ARE so well known as to render description unnecessary to the keepers of cattle, it only remains to point out the remedy, in order to which, take butter of antimony one ounce, oil of vitriol $\frac{1}{2}$ an ounce, mix for use—this may be made weaker by the addition of rum or brandy. It is a strong caustic, and requires care in its application; when necessary take a probe, dip it in the above mixture and apply it to the affected part, and you will soon see them vanish before it. Tar as an ointment, is good for destroying them, but should they be suffered to grow to a large size, the best way is to cut them off with a

sharp knife, sear the part with a hot iron, and apply the caustic to prevent its rising again.

STIFLE JOINT

Is sometimes thrown out by a beast slipping sideways, crossing ditches, &c. Lameness immediately ensues in the hind leg, causing the animal to step short in its walk; as soon as this is perceived, no time should be lost in putting the cap in again, otherwise the animal may labour under continual lameness; to effect a cure, fasten the beast by the head, take a rope and fix it above the hoof, drawing the leg forward, another person must endeavour to find the cap, which is generally slipped off low to one side; when found, he must attempt to put it into its right place again, which is effected by pressure with the hand, requiring some little art; when done, draw the foot quite back, by which it will be retained in its proper place.

Bathe the joint with a mixture of one pint of vinegar, and one ounce of crude sal ammoniac, twice a day, and the beast will soon be well.

It may not be improper here to introduce an excellent mixture for strains of the sinews, or bruises proceeding from any cause whatever.

RECIPE.

Crude Sal Ammoniac powdered,	1 oz.
Best Wine Vinegar,	1 pint.

This is a powerful and efficacious remedy.—Or take,

RECIPE.

Spirits of Wine,	4 ozs.
Spirits of Sal Ammoniac,	1 oz.
Oil of Turpentine,	2 ozs.
Camphor,	4 drams.
Vinegar,	1 gill.

Dissolve the camphor in the spirits of wine, to which add the other ingredients; care must be taken to keep the bottle close stopt in which this mixture is kept, or the camphor will soon evaporate. A bandage should be applied when the part affected will admit thereof.

For an excellent plaster for this purpose, see Appendix.

LICE.

HORNED cattle are often infested with lice ; some ascribe the cause thereof to poor food, wet lying, turning them out of warm houses to encounter cold strong weather, &c. When discovered, the most effectual remedy is mercurial ointment, which when used with discretion and judgment is not in the least dangerous. The following is a safe and speedy cure : take mercurial ointment one ounce, hogslard eight ounces, mix them well together, and lay it to the skin, lengthways on the neck, and all the length of the back, or wherever necessary ; or take half a pound of tobacco, four ounces of soft soap, boil these in one gallon of chamberlee, and wash the animal well where any vermin appear, and it will soon destroy them ; some use the following mixture : take ash leaves, or the top branches, burn them to ashes, reduce them to a fine powder, and sift them through a fine sieve ; then to one pound of ashes mix one ounce of red precipitate, and rub a little on the parts infested.

SORE TEATS, or PAPS,

ARE very troublesome to the animal when she is milked, frequently bleeding, which not only keeps the wound open, but attracts the flies thereunto; use the following mixture three times a day, and you may promise yourself much success :

RECIPE.

Spirits of Wine,	4 ozs.
Compound Tincture of Myrrh,	2 ozs.

Shake them well together and they will be ready for use.

The following ointment is excellently adapted to keep off the flies, and should be applied immediately after milking the cows.

RECIPE.

Coarse Turpentine,	2 ozs.
Neat-foot Oil,	2 ozs.
Tar,	2 ozs.
Verdigrease,	1 dram.

Mix and incorporate them well for use.—Or,

RECIPE.

Elder Ointment,	4 ozs.
Roach Allum, in fine powder,	1 dram.
Oil of Savin.	1 dram.

Mix and apply as before directed, and give the cow a Felon Drink.

BURNING, or the HEAT,

In my opinion is not a disease, nor ought it to be regarded as such ; if I may be allowed to form an opinion on the subject, founded on observations made on some hundreds of cows, I should not hesitate to pronounce it a natural evacuation, copiously discharged from the baron after coition, or the act of copulation.

When cows have been overheated by driving to and from the bull, excessive perspiration closes the pores of the skin, the beast appears dull, and small blisters sometimes appear in the baron ; but in all my practice I never met with a single instance in which I should have thought myself justifiable in pronouncing it a disease, though it is a common practice with Cow Doctors to prescribe for it as if it really was one ; I expect their censure for this frank confession, but I cannot from fear of that, sacrifice what I conceive to be truth ; nor could I, through a long series of years, once be induced to practise on the ignorance or credulity of my employers respecting the subject in hand,

unless downright obstinacy has persisted in being indulged therein. For I know from experience, that the heat or burning in cows, may in general be cured by the same remedy as is prescribed for the Felon, viz. salt petre, glauber salts, &c. &c.

The baron is sometimes injured by accidents, bruises, &c. in which case, I would advise to wash the part with the following mixture; sugar of lead one dram, white vitriol one dram, dissolved in a gill of vinegar.

OF WOUNDS and BRUISES.

LACERATED wounds are more difficult to heal than such as are made with a sharp instrument; but the best method of curing wounds in general, is to bring the lips of them together, and keep them in that position by means of bandages, or else by stitches.—If the animal is in good health, the parts will cohere in a few days and heal.

It may be proper at first to cover the part with a poultice, and afterwards when matter is formed, to use the common ointments recommended. This is what surgeons call

healing by the first intention.—It will be readily allowed, that the atmospheric air is very prejudicial to raw wounds, and the chief indication of cure is to prevent its access. A conviction or firm persuasion of this, induces me to conclude, that the efficacy of various tinctures consists entirely in this, and the spirit which they contain is the only article of any peculiar utility.

Considerable improvement has of late years been made in the reduction of dislocated limbs; formerly it was the practice to stretch out the limb, which by extending the muscles, brought an antagonist power into action against the operator: the judicious practitioner now relaxes and bends the limb, and by this means the reduction is accomplished with tenfold ease; I speak now of the practice of our ablest surgeons, and since the structure of all animal bodies is the same, I think this mode of treatment ought to be attended to in reducing dislocations in cattle; the limb being placed in a relaxed posture some time previous to the operation commencing.

When Neat Cattle are wounded by accident or otherwise, the wound ought to be

kept very clean, and bathed with brandy, tincture of myrrh, &c. should it be of considerable length, so as to cause a great division of the skin, it must be drawn together with a needle and strong thread, well waxed with bees wax, leaving about an inch open, in order that the pus or matter may discharge itself; a very good ointment may be made of equal parts of tar, common turpentine and hogslard, which must be applied pretty warm to the wound.

Should any fungous or proud flesh arise, you may soon reduce it by the use of red precipitate, blue vitriol, or brandy, and oil of vitriol mixed together, proportioning the strength thereof to the obstinacy of the fungous flesh. There is not a worse accident befalls cattle, than when the large tendon commonly called hamstring, is cut; some are of opinion, that it cannot be cured; but I am confident in a contrary one, and found that opinion on experience, an instance of which I beg leave to cite for the conviction of those who hold a cure impossible to effect. Mr. William Walker, of Thornhill, near Dewsbury, in the West-Riding of Yorkshire,

having one of his cow's hamstrings cut entirely through by a spade, I was sent for on the occasion, examined the nature and extent of the wound, drew the divided tendon together with strong thread, as also the skin; this done, I dressed the wound with tincture of myrrh, and with suitable bandages wrapped up the leg in a favourable posture; the cow was full with calf, and in four months I had the satisfaction to witness a perfect cure, and have no hesitation in saying, the leg after cure, was apparently stronger than the other.

When a beast gets a severe bruise, from which arises a tumour, an incision should be made below or near the part, bathing all round the same with a mixture of spirits of wine, vinegar, and nitre; it is good to introduce a little of the ointment into the wound, on a little tow, dressing it every day.

HOW

TO EXTRACT A CALF,

WHEN IT PRESENTS ITSELF

IN A WRONG POSITION.

THE best position of a calf for easy extraction, is when its fore feet and head present themselves first; its back towards the cow's back, and its fore feet in a line with the head. When a calf presents itself in any other form, it must be replaced in a proper manner, so as to favour delivery; so various are the postures in which they present themselves, that it would be a fruitless task to attempt to describe all. Should only one foot appear, it should be put back to find the other: when both are found, examine to see whether the head presents itself in a fit position; sometimes it will slip back, in which case it is most expedient to attach a cord to the under jaw, by which you can cause

the feet and head to come in a direct line, making sure of a proper person to attend the womb. It is no unusual thing for a calf's hind parts to appear, if so, put the calf back as before, and search for the hind feet. Where it can be conveniently done, I think it most advisable, and the most safe way, to extract the calf in the posture it presents itself, than to turn it in the womb, except in some very singular and awkward positions. If for instance, the calf lie with its feet upward towards the cow's back, gently turn it so as that its back shall be towards the back of its dam. The cow should be made to stand in an advantageous posture, always letting her hind parts be on a rising ground, or higher than her fore parts; the most awkward and difficult posture is, when the calf's shoulder presents itself; endeavour to find a foot, which accomplished, secure by a proper cord, put it back and search for the other; be cautious that the fore feet or hind ones, if they present themselves, come exactly together, or as near as can be.

When the common method fails, or cannot be had recourse to by reason of the calf being dead, you must endeavour to cut it

away with a knife; this operation requires a combination of care and judgment; in the performance of which, first slit the skin above the knee, that is all round and towards the shoulders; draw each shoulder from the body, and fix a crook in the sockets of the eyes or in the ears, or any convenient place, being first assured that you can retain your hold. It is necessary to have a hole in the crook to which a cord must be attached, which will greatly facilitate extraction; the calf sometimes stops in the hips, your object then must be to remove the impediment by cutting along the back, and between the hips, until you get all away. Remember to be as expeditious in this operation as you possibly can.

There is a notable obstruction to delivery, known by the name of *Horning of the Lye*, or *Calf Bed*, &c. when the passage is so much contracted as to forbid the admission of a hand. I have even seen cases where it has been so very close, as not to admit a single finger, and so horned as to render calving impossible without assistance; too many valuable animals have fallen victims to this inconvenience, which might have been

saved by judicious treatment. When a cow has gone her full time, and appears sick, seems very uneasy, frequently rising up and lying down again, without any thing appearing, there is no harm in searching with the hand, it being previously oiled, to see whether there is a free passage or not; should it be found in the state just described, the beast being sick, and symptoms of calving manifesting themselves, immediate relief must be afforded it.

Some recommend a knife to cut it open, but an expert hand will under every circumstance stated, manage the business without it. By searching with the fingers you will find a small space in the lye, into which you must by movement and pressure, introduce one or more of your fingers, till by degrees the whole hand can be admitted, on which a large discharge of water generally ensues, the calf having laboured under these circumstances, is often so much weakened thereby as to cause its head frequently to fall back.

It is a good method to fix a cord to its under jaw, you can thereby keep it in its proper place, and are enabled greatly to assist the cow in her throes, by gently drawing the cord at the same time.

The beast should by all means have a cleansing drink given her, for which purpose, take

RECIPE.

Juniper Berries,	4 ozs.
Gentian Root, in powder,	4 ozs.
Sulphur,	3 ozs.
Ginger,	2 ozs.
Nitre,	3 ozs.

Mix these together and divide for two doses; give each dose in 3 pints of penny royal tea, first adding 4 ozs. of treacle, and 4 ozs. of butter;—or, Irish slate in fine powder 2 ozs. aniseeds powdered 4 ozs. spermaceti 1 oz. grains of paradise 1 oz. Mix and give the whole for one dose.—Or,

RECIPE.

Aniseeds in powder,	2 ozs.
Ginger in powder,	2 ozs.
Cumminseed in powder,	2 ozs.
Spermaceti,	2 ozs.
Sulphur,	1 oz.

Mix for one dose and give as before directed.

FALLING DOWN of the CALF BED,

Is without strict attendance always accompanied with danger; it is often provoked by mismanagement in extracting the calf; sometimes it proceeds from weakness, and at others from the beast lying very low with her hind parts in the stall, especially a little before the time of calving. When this becomes constitutional, fatten the beast as soon as possible, for it is a growing evil, and gains ground every year.

I have known it fall down so low as to render it impossible for the cow, when rising up, to recover herself without manual assistance. When this happens, wash the calf bed with warm milk and water perfectly clean; when done, with a clean sheet bear up the part, fomenting it with rum and milk. If after calving any cleansing remains, take it away as you find it inclined to part from the glands, or what is commonly called the buttons or burs: when removed, and the animal favourably situated with its hind part very high, introduce your hand with the fingers drawn into the centre of the uterus,

then gently and gradually urge it up to the baron, continuing it there till the whole substance of the uterus is replaced, and the parts begin to move about your hand and feel warm. On the removal of your hand, lead the beast down a hill, or set her hind parts very high in the stall.

The following glyster may be used; take one quart of the decoction of oak bark, one quart of thin gruel, and half a pound of treacle, inject it warm.

It is common to sew the baron with a shoe-maker's end, the stitches to be one inch asunder for the evacuation of urine.

ON COWS CALVING

BEFORE THE EXPIRATION OF NINE MONTHS;

COMMONLY CALLED

SLIPPING THE CALF.

CONJECTURES may be formed, but I judge it impossible to speak with certainty respecting the cause of cows casting their calves; instances occur of this happening in

A a

one beast, from six to twelve weeks before the completion of her time, and that for three successive years, after which she bred regularly for a number of years.

If any thing may be relied on as a remedy, I think bleeding, cooling medicines, and cleanliness are the things which promise most success.

Cows with calf should never come within the smell of slaughter-houses, bad smells in general are very injurious to them—bury their cleansings, &c. The placenta or cleansing sometimes rots away, in this case they require two or three cleansing drinks, for want of which they are frequently disagreeable to the other cattle. In extensive dairies, sometimes two, five, or ten cows may slip their calves, and it is notorious that many practitioners talk with much gravity of professing the power of stopping it: but I am persuaded it is mere matter of chance, multiplied of late are nostrums, and given with unblushing assurance, as certain specifics amongst the rest, equally as insignificant is that of filling an egg shell with spermaceti and giving it to the cow. Such nostrums may be imposed upon the ignorant or the unwary, but not on

men capable of forming rational ideas, or reasoning from the analogy of things. Should you have one or more cows slip their calves, say six weeks before the expiration of their full time, I would recommend as a preventive, in future, to bleed seven weeks before the completion of their nine months; some recommend to bleed them fourteen days before they have arrived at the time in which they last slipped their calves, and again at the very time; whenever a cow slips her calf, remove her from the rest, and fumigate the cow-house, &c. with burnt feathers, tar, quick lime, &c. &c.

The following medicine may prove serviceable :

RECIPE.

Ginger in powder,	....	....	....	2 ozs.
Aniseeds in powder,	....	....	....	2 ozs.
Juniper Berries in powder,	....	....	....	4 ozs.
Camphor,	....	....	....	1 dram.

Dissolve the camphor in a little brandy, and give it in gruel.

OF THE GUT-TIE;

Or a Twist in the Intestines.

THIS generally proceeds from mismanagement in the castration of stot calves; it is productive of a total stoppage in the bowels, and is frequently mistaken for the colic. The animal is in great pain, and strikes much with its feet against its belly, lies down and groans often and loud.

The only method of performing a cure, is by making an incision under the loin, or over the stomach, for the purpose of introducing the hand, with which as you advance it towards the intestines, you will find a string left there at the time of castration, now twisted round the gut, cut this string in two with a knife, and the ox will gain immediate relief.

 CATTLE,

WHEN

FEEDING ON TURNIPS OR POTATOES,

FREQUENTLY gather up a small one, or part of a large one into the mouth, shooting

out their nose and neck upright until they get it between the grinders, this by accident or an effort to swallow it, passes into the throat, and endangers the animal's life from choaking it; relief should be immediately afforded if possible, the best is to press the offending substance up with the hand, but if it cannot be effected by this means, recourse may be had to a turnip rope; or what is far superior, an instrument made of whale bone, the shape of which must correspond with the annexed figure, in length four feet six inches, the circular knob at the low end is made of iron, but must be covered with soft leather; when you have occasion to use it, rub the knob well with tallow, which will prevent irritation; place a man on each side of the beast, to keep its nose in a right line with its back, a third must put the instrument very carefully down the throat, being particularly careful not to hurt the gullet, and your labour will soon be rewarded with deserved success. Many valuable animals have lost their lives by igno-



rant men thrusting a rope down their throats by main force, particularly when the head has inclined to one side. Some cattle are much more subject to this accident than others, which may be prevented by fixing a rope conveniently to the head of the animal, and fastening it in such a manner so as to prevent it elevating itself till after its repast.

ON THE

DISEASES OF YOUNG CALVES.

AFTER extraction lay some salt upon the calf for the cow to lick, putting a little also into the calf's mouth, which will clean the phlegm in the throat; move the young animal about, and it will sooner recover its breath and become strong. On its entrance into the world, if it prove very weak, blow air down its throat and into its nostrils, as soon as it is able to stand, give it some beestings, they are of a purgative nature, and will cleanse the stomach of its meconium. Do not suffer your calves to run about after sucking, unless it be to run with their dam, too much liberty in this respect frequently causes their bodies to

swell, and often occasions death. See that they be regularly fed, but not crammed with too much at a time; calves fed three times a day thrive better than those fed only twice on the same quantity and quality of food; calves that are only fed once in twelve hours, become so eager for food, that they surcharge the stomach, and the milk becoming a hard indigestible curd, proves injurious to its weak frame. To this cause may be attributed the death of more young calves, than to any disorder whatever. When the stomach is too weak to digest the food taken into it; the following prognostics appear, a dull sluggishness, refusing to take their food; twitching pains in the body, and commonly lying all their length. Under this complaint, the medicine of all others to be administered, should be such as is calculated to dissolve the coagulated curd, and cleanse the stomach; to effect this end, take

RECIPE.

Gentian Root in powder,	....	....	4 drams.
Salts of Tartar,	....	....	4 drams.
Turkey Rhubarb powdered,	....		4 drams.
Vinegar six table spoonsful,	....	....

Mix and give it for one dose, in one quart of warm beer, adding 2 ozs. of butter, repeat the dose in twelve hours if occasion require.

When the above cannot be readily got, give three ounces of common salt, beat together with two raw eggs, in a pint of horehound tea.

Calves are subject to a costive habit of body when young; to relieve them from which, take ginger one ounce, cream of tartar one ounce, glauber salts four ounces, mix and give it in three gills of gruel for one dose; or, for a large strong calf, take Barbadoes aloes two drams, ginger half an ounce, aniseeds powdered, half an ounce, give this for one dose, in three gills of warm ale, and a little treacle, and two ounces of butter; or give a gill of linsseed oil in their food, repeating it occasionally.

Every one who breeds calves should know, that good fat broth, mixed with milk, forms excellent food, which is at once both opening and nourishing.

THE JOINT FELON,

OFTEN proves mortal to young calves, for want of an early remedy; it begins with a swelling and lameness in the joints, and may be greatly relieved by an early use of the following mixture; gentian root in powder 1 oz. Venice treacle 1 oz. crude sal ammoniac one dram, mix and give it for one dose, in good ale and treacle once a day, till the calf recovers; the following mixture will be found very useful to rub the joints with twice a day. Take spirits of wine 4 ozs. oil of turpentine 2 ozs. spirits of sal ammoniac 2 ozs. olive oil 4 ozs. mix in a bottle for use.

I have known much good accrue from the use of mild blistering ointment applied round the joint. The last named mixture for the Joint Felon is of great service for a tumour on the navel string; pour a little of it into the palm of your hand, and rub well about the navel string twice a day, applying a poultice round the body by means of a bandage, the poultice to be made of oatmeal, bran and ale grounds, &c.

LOOSENESS

FREQUENTLY attacks young calves, proceeding from cold, wet lying, improper diet, irregular feeding, &c. the symptoms are continual looseness, the excrement slimy, and of a fetid offensive smell; sometimes there is an appearance of the great gut coming down; never suffer the dung to remain long without a removal, observing to keep the calves warm and clean. This disease sometimes proves infectious, and is very often troublesome to excess; nevertheless with good management and suitable medicine, administered in time, it is no ways difficult to cure; for which purpose take

RECIPE.

Gentian Root in powder, ...	1 oz.
Turkey Rhubarb, ...	4 drams.
Salt of Tartar, ...	2 drams.
Vinegar six table spoonsful ...	

Mix and give this for one dose in a pint of ale, repeating the same in twelve hours.

In an inveterate looseness make a strong decoction of the leaves or buds of briars, the same of oak bark; then to three gills of the

decoction, add two drams of salt of tartar, forty drops of oil of vitriol, and one dram of prepared chalk ; this is for one dose, repeating it every twelve hours, or as occasion may require—the diet should have a particular attention paid to it : the milk should be well scalded, adding a little fine wheat flour at the time of boiling. I have more than once known it stopt by the use of rennet, with which dairy women curdle milk for the purpose of making cheese ; or take one sheet of writing paper, burn it, letting the ashes drop into a quart of milk, boil it down to a pint, and give it for one dose.

When the calf appears weak, give a gill of red port wine in gruel, adding 20 drops of liquid laudanum. In looseness and irritations of the bowels, glysters should be had recourse to, as they are particularly serviceable therein.

A good glyster for this purpose is made by dissolving half an ounce of starch, in a gill of boiling water, adding half an ounce of Venice treacle, and mix the whole in one quart of thin gruel ; inject it warm, and repeat it twice a day—the oil of vitriol diluted with water is a good stomachic, and joined with tartar, has

scarce its equal for strengthening the stomach, from the weak state of which this disease proceeds.

BLACK QUARTER, or MURRAIN.

GREAT are the losses sustained by the breeders of Neat Cattle, from this disorder; calves and heifers seldom recovering when once seized therewith. It commonly begins with a lameness in the fetlock joint, rising by degrees to the hock or hough, and thence proceeds into the quarters, spreading towards the loins. Young cattle that are in the best condition fall victims to it more than any others, from which it appears to proceed from high feeding, producing gross blood, &c.

The only preventive at present known, is to be applied when they arrive at the age of three or four months old. In the fore part of each foot, several sinews are found, by cutting through the skin on the fore part of the hoof, between the division it is that the sinews appear, the cut should exceed one inch and a half. A blood vessel will also be

seen, which must be raised by a crooked instrument resembling a packing needle, and about half an inch of this vessel must be cut entirely away, the object of which operation, is to turn the circulation into another channel, and thereby prevent the disease. Rowland advises, that every limb should undergo the same operation, and the animal kept in a dry place for the space of three or four days. To facilitate the operation, throw the calf down on its back in a soft place, taking care to have assistants to hold its legs, whilst the operator extracts the veins, which effected, wrap up the wounds, covering them with common salt, and a little bacon fat. Should any be unwilling to try the above method, I would advise them to take away one quart of blood as a preventive, giving half an ounce of nitre, one ounce of sulphur, and three ounces of common salt in camomile or horehound tea.

OBSERVATIONS

ON THE

TREATMENT OF SICK CATTLE.

GREAT care and good management are essentially necessary to the well-being and recovery of sick cattle, without these, in vain may medicine be administered. At the first attack of any disease, solid food should be sparingly given them, and a tolerably warm cow-house receive them. When rumination ceases, all kind of solid food should be dealt to them with a penurious hand. A beast in perfect health has generally more than eighty pounds weight of solid food in the stomach, which certainly must require time for digestion. Oatmeal gruel seasoned well with salt and butter is sufficient support, if given at the rate of two quarts every four hours. Salt is an invaluable article for cattle, it is of an opening and purgative quality, and may be administered with safety in large quantities, under any complaint, whether internal or external. When cattle are afflicted with any disease, particular attention should be paid to rumination or chewing the cud—as also to the manifolds, for here is the seat of many a fatal

disease, especially of the Milk Fever; in this case, glauber salts and nitre have good effects. Too much praise cannot be bestowed on nitre, particularly in any inflammatory disease; it may be given from $\frac{1}{2}$ an ounce, to one ounce, two or three times a day, and proves excellent in recovering the cud. Juniper berries are of great utility in recovering the cud, for which purpose they should be put whole into the mouth to the grinders, five or six times a day; it is said they are a specific for the felon. Cattle under most complaints, evince a desire for fine fresh mould, or earth, this you may indulge them in, as it takes away the acidity from the stomach, and causes them to cud. A small quantity of bad hay produces the same effect, the animal generally preferring it to good, till nature gets relieved in the recovery thereof; limeseed tea is a valuable article, nor should you be too sparing in the use of butter or limeseed oil, it is safe to administer it in almost every complaint; the morning after any medicine has been given, a malt mash is very proper.

Bran is sometimes bad in quality, and never equal to gruel. The medicines should always be given fasting, and at night is better

than in the morning, except in some sudden attack. The best method of preventing the milk fever, is to give one ounce of nitre, and four ounces of common salt, at the time of calving, in three pints of water gruel. Bleeding may be of service a few days before calving; limeseed tea is also very proper to give both before and after calving, and is a good preventive.

When cattle are ill, their breath should be noticed; if it is strong, it denotes a disordered stomach, for which gruel should be then made of strong bitter tea, such as camomile, wormwood, tansey, &c. pennyroyal is an excellent herb in all fevers.

Whenever a beast is taken ill, and the disease is not properly ascertained, it is very proper to give nitre in gruel, and carefully to attend to the symptoms exhibited, by which means, in a little time the disease may be discovered, and of course proper remedies be administered to suit every case. When a beast is unable to get up, never sling it; it is never safe, and very often proves fatal to the life of a valuable animal; the surest indications of good health in cattle are liveliness and briskness in all their motions and actions;

the hide feels loose and handles kindly on the ribs; a constant dew, as it is termed, is visible on their nostrils, and when rising up, they stretch themselves, and chew the cud regularly.

OF BLEEDING.

By pointing out what circumstances are favourable or proper to bleed under, it is found of essential service when the legs of your cattle swell, or when their eyes look heavy, dull, red, or inflamed; it is equally necessary when from being too high fed, they are induced to rub off their hair, the operation should also be had recourse to, in all inflammations, fevers, &c. nor less in bruises, about the eyes; sprains also claim its aid when accompanied with inflammatory symptoms.

As things beneficial in themselves, under certain restrictions, may become evils of great magnitude if carried to excess, it is necessary to prescribe bounds to bleeding; for it is extremely hazardous to bleed when the spirits are too much exhausted or weakened,

and nature is unable to bear the least evacuation. And further it is most proper to bleed by measure, and most to be depended on, and experience warrants me to say, that in most cases two quarts of blood will be sufficient to take away at once, and repeated accordingly as circumstances may require.

THE METHOD OF
REARING YOUNG CALVES,

BY A YORKSHIRE FARMER.

VARIOUS methods have been practised in regard to the rearing and food for young calves; but long experience, with a mind always open to conviction, and a stock which has produced the most money for a given quantity of food, and in the least time of any in Great Britain, cannot justly be denied to promise, and afford the most substantial proofs of the best method of treatment—I here allude to a farmer in the North of Yorkshire.

He observes the most beneficial time for breeding young calves for stock, is in February and March. Those intended for stock he

permits to suck the cow twice a day for a fortnight, allowing them to take only a certain quantity of what is called the fore ends, and stripping the cows perfectly clean for the dairy. Always observing, that the calf has plenty of clean straw, and lies dry in a tolerably warm house or mistal. When they are a fortnight old, he takes them from the cow, puts them into a convenient house, and gives them skim'd milk scalded for one month longer, allowing them a little good hay, which they soon learn to eat. When they are six weeks old, the milk is mixed with oatmeal gruel, and allows them a little bean meal, only to lick out of a trough. He approves of linsseed tea mixed with the milk, equal quantities of each. The allowance each calf should have cannot be judged of; that depends entirely upon the size of the calf.—Every feeder should be very cautious not to give them too much at one time, but always to keep them regular.—Giving turnips at the age of six weeks is recommended.—No proper time can be fixed for giving up serving them, as it entirely depends upon the strength of the calf; some are taken away at two months old, others at three months, and put

into a good sweet grass pasture. By this mode of treatment, the person alluded to has not lost one for several years.

Milk is the cheapest and best food that can be given them: and those who have not milk will never receive any advantage by breeding. A decoction of hay tea, or linseed, or oatmeal, given to young calves without milk, causes them to be big-bodied, poor, and frequently it is attended with an inveterate looseness, which too often proves fatal. The winter following they are put upon turnips, which are excellent food, and keep them in good condition until the following spring.

The calves meant for veal have the fore ends of the cow's milk for one week, then the latter ends; and they are generally sold to the butcher at three or four weeks old.—A good-bred calf is sold as high as from three to four pounds. It must be observed, the calves meant for rearing have their liberty in the house. Those meant for fattening are close confined to a post, and always allowed a sufficient quantity of clean straw.

When a calf does not suck freely, raw eggs and salt are administered with success.

APPENDIX,

Containing several approved and valuable Recipes for the relief of Neat Cattle, suffering under the various Complaints enumerated in this Treatise; together with some celebrated Tinctures, Salves, &c. never before made public.

A SAFE PRESCRIPTION

TO MAKE

A COW TAKE THE BULL.

TAKE grains of paradise powdered 1 oz. cumminseeds 1 oz. juniper berries 3 ozs. tincture of cantharides $\frac{1}{2}$ oz. mix for one dose, to be given in three pints of ale; to which add 4 ozs. of treacle, and 4 ozs. of butter, also one glass of gin; repeat if necessary in ten or twelve days.—Or,

Take aniseeds and cumminseeds, of each 2ozs. grains of paradise 2 ozs. juniper berries 6 ozs. tincture of cantharides $\frac{1}{2}$ oz. mix and

divide into two equal portions, each forms one dose, given in three pints of ale, adding to each dose the same quantity of treacle and butter as before prescribed; either of the above drinks may be given with the greatest safety; they are admirably calculated for cold sluggish, dispositions; strengthen the stomach; open obstructions in the urinary passages, and procure a regular evacuation.

POWDER,

Necessary to be kept ready for Use.

TAKE equal weights of the following ingredients—ginger, gentian root, juniper berries, aniseeds, mustard, and sulphur, reduce all to a fine powder, mix and incorporate all well together, and keep it in a close covered pot for use—its application is, whenever a drink is wanted, take seven ounces of this powder, and give it in the usual quantity of good Beer.

From a prevailing custom of guessing powders by the hand, which is always liable to be deceived, I would particularly recommend them to be weighed before you make

your drinks, which when you give it, be careful not to horn it in too fast. Respect should be had too to the size of the animal, adding or diminishing accordingly ; nor ought the quality of the drugs employed, to go unnoticed by you, since some are as strong again as others, though called by the same name, and sold for the same article : be sure always to purchase the best drugs.

The above powder may be mixed with proportionate quantities of glauber salts, crude sal ammoniac, nitre, aloes, &c. according as circumstances may require.

TO MAKE EXTRACT OF LEAD,

COMMONLY CALLED

G O W L A R D.

TAKE four pints of white wine vinegar, and two pounds of litharge of gold, put them together in a glazed pot, and let them simmer over a gentle fire an hour and a half, keeping constantly stirring them with a piece of flat wood, then take the pot from the fire, let the whole subside, when done, pour off the clear liquor and keep it in a bottle for

use. It is excellent in all recent external injuries, such as blows, bruises, hurts, &c. also for the eye-lids, when affected with a swelling and inflammation.

BLACK OILS.

TAKE oil of turpentine 4 ozs. lineseed oil 8 ozs. oil of vitriol 2 ozs. mix together in a quart bottle, when the agitation ceases, add 2 ozs. of spirits of wine, and fill the bottle with lineseed oil, this is much used for wounds in the fleshy parts.

BALSAM of SULPHUR and TURPENTINE.

RECIPE. To one pint of balsam of sulphur, add one ounce of oil of turpentine, incorporate well together. This frequently goes by the name of British Oil, and is used for green wounds, burns, and scalds; it is also taken for the gravel, by adding two drams of liquid laudanum, and is no way inferior to the Haerlem drops.

OINTMENT called AEGYPTIACUM.

TAKE verdigrease five ounces, honey fourteen ounces, vinegar seven ounces, gently boil them over a slow fire till they assume the consistence of an ointment; it is excellent to cleanse ulcers, and suppress fungous, or proud flesh. If it is kept any length of time, it should be stirred up before it is used, as the thickest part subsides and separates from the thinner, or lighter

GREEN OINTMENT.

TAKE of common turpentine and bees wax, of each half a pound, fresh butter, free from salt, one pound, verdigrease in fine powder two ounces. Melt the three first mentioned articles over a slow fire, and then put in the verdigrease, stirring the whole mass round, and being very careful to prevent its rising over; let this mixture just simmer, strain it into a clean earthen pot, and keep it close covered for use.

This ointment cures sores in any part of the body, and is a very proper application after caustics for the foul in beasts' feet.

A STRENGTHENING CHARGE.

WHEN a beast has got strained in the loins, or any other part; the following charge is of great service :

RECIPE.

Common Turpentine,	8 ozs.
Black Pitch	8 ozs.
Yellow Rosin,	8 ozs.

Boil those over a gentle fire, and keep stirring until united ; when in a warm state apply it to the part affected.

 OPODELDOC.

TAKE soft soap eight ounces, camphor one ounce, rectified spirit of wine two pints, water six pints; dissolve the camphor in the spirit of wine, and melt the soap in the water; when nearly cold, pour in the spirit of wine, and it is ready for use—observe to keep it well corked: It is much used for curing green wounds, sprains, bruises, &c. &c.

COMPOUND SPIRIT of LAVENDER.

TAKE one ounce of the true red saunders, half an ounce of cassia buds bruised, one ounce of Jamaica pepper corns bruised, two drams of Winter bark bruised, two drams of oil of lavender, half a dram of salts of tartar, and three pints of spirit of wine; mix all together in the spirit of wine, let it stand for fourteen days, frequently shaking it well up, after which time filter it for use: this is an excellent cordial, one ounce may be taken in a quart of warm ale, for laxity and debility of the stomach, and intestines; this dose is sufficient for a full grown animal.

LAUDANUM.

TAKE gum-opium shred small one ounce, red port wine half a gill, rectified spirit of wine one gill, let the opium infuse in these ten days, shaking it frequently, filter for use, adding one gill of pure water.

TO STOP BLEEDING.

TAKE balsam of poplar and apply it to the part; if mixed with honey, it is excellent for wounds.

TINCTURE of MYRRH with ALOES.

TAKE Barbadoes aloes one ounce, gum myrrh one ounce, salt of tartar three drams, rectified spirit of wine two pints, mix and let it stand for ten days, shaking it frequently, strain it for use.—If half an ounce of oil of vitriol be added, it makes an excellent tincture for green wounds.

FRIAR'S BALSAM.

TAKE gum benjamin one ounce, balsam of tolu one ounce, gum storax one ounce, succotrine aloes half an ounce, gum guaiacum one ounce, frankincense one ounce, myrrh one ounce, rectified spirit of wine three pints, proof spirit one pint, bruise the gums, &c. mix them with the spirit; dissolve them in a gentle heat for seven days, then decant it off for use; it is excellent for healing green wounds, particularly the tendons, or the joints.

BRITISH OIL.

TAKE oil of turpentine 8 ozs. balsam of sulphur 16 ozs. oil of brick 8 ozs. Barbadoes tar 4 ozs. lineseed oil one pint, mix all together for use.

THE CELEBRATED

RED BOTTLE,

OR

COMMONLY CALLED CURE-ALL,

WHICH from experience I am authorized to say, is superior in efficacy to the various nostrums advertised, as the TINCTURE OF LIFE, RED BOTTLE, WHITWORTH BOTTLE, &c. &c.

The best rectified spirit of wine one pint, alkanet root two drams, or red saunders one dram, those serve for a colouring ingredient; let it infuse two days, shaking it in the bottle two or three times; then take oil of origanum six drams, oil of turpentine three drams, mix these and add them to the spirit of wine. Sometimes ginger, capsicum, clove pepper, &c. are added to the infusion, but the mixture is hot enough without such additions; but for those who frequently use it for Bilious Complaints, I would recommend the addition of one dram of liquid laudanum, and one dram of camphor; twenty-five drops taken in a glass of gin, or loaf sugar, is excellent for pains in the stomach, or for the

Colic *, in the human species: the same quantity is taken for inward bruises with good effect. It may be applied with lint for the tooth ach, and with wool for the ear ach, nor is it less efficacious in head aches, if snuffed up the nostrils; great advantage may also be derived from its application to green wounds, bruises, sprains, burns, &c. &c.

Its application should be as soon as possible after an accident has happened, otherwise it is liable to produce violent inflammations.

In the preparation of this tincture be particular in purchasing the best rectified spirit of wine; you may also omit the colouring articles, as their only use is to deceive the unwary, not to contribute any thing to its utility as a tincture.

THE BLACK ROLL,

COMMONLY CALLED BURN SALVE.

TAKE a pint of linsseed oil, and half a pound of finely powdered litharge of gold; boil them over a gentle fire, with five or six spoonsful of water therein, carefully stirring

* One ounce given to a Beast in one quart of ale is a good cordial.

it till the oil and litharge are united and have acquired a due consistence, then add eight ounces of bees wax, boil it a little longer, till the whole are properly united, after which pour it out into a stone trough filled partly with water, you may then make it into rolls to suit your own convenience. It makes an excellent plaster, and is commonly used after the Red Bottle has been applied.—Spread it on leather, and it will be found powerfully efficacious for sprains, burns, bruises, wounds, &c. &c.

It has long been esteemed for affording relief to those who labour under blains, sore breasts, &c. &c. And if not superior to most other salves, has the merit of being inferior to none.

VOLATILE LINIMENT;

Or White Rubbing Bottle.

TAKE Florence oil 2 ozs. camphor one dram, spirits of sal ammoniac 2 ozs. spirit of wine 1 oz. dissolve the camphor in the spirit of wine, and mix for use; this mixture is particularly efficacious in inflammations or swellings, and seldom fails after bleeding, either to lessen or carry off the complaint.

Humoural tumours may be dispersed or brought to suppuration, by rubbing them well two or three times a day, with a mixture of common oil one gill, oil of turpentine 6 ozs. observing to rub the part well with your hand, after you have rubbed in the mixture.

AN EXCELLENT DIET DRINK.

TAKE sassafras chips 2 ozs. guiacum shavings 2 ozs. juniper berries 2 ozs. cream of tartar 1 oz. glauber salts 3 ozs. sena 1 oz. camomile flowers, horehound, ground ivy, of each a handful; boil these in seven quarts of strong malt liquor for half an hour; work it with yeast, and bottle it for use; take for one dose from a gill to a pint every other morning. It is well calculated to remove Scorbutic Complaints, &c. and restore lost appetite.

FOR A SPECK ON THE EYES OF CATTLE.

TAKE white copperas one dram, crude sal ammoniac one dram, loaf sugar one dram, mix and reduce them to a very fine powder; and blow it into the eye through a quill.

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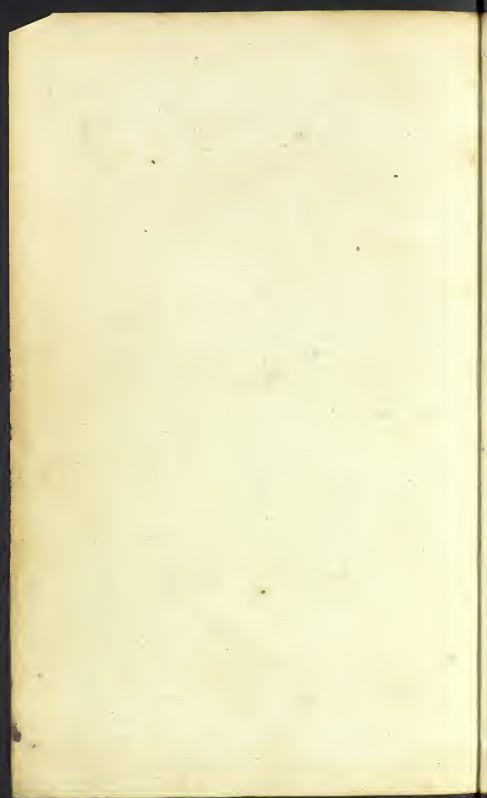
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